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Meetings of Mining Companies.

GREAT WHEAL VOR UNITED MINING COMPANY.

The general meeting of shareholders was held at the company's offices, Gresham House, on Wednesday,—

Mr. G. NOAKES, F.G.S., in the chair.

Mr. TRURAN (the secretary) read the notice convening the meeting, and the minutes of the last were confirmed.

The report of the committee of management was read, as follows:—

The committee regret that the result of the quarter's operations has not yielded the returns anticipated. The stopes, which at the last meeting were reported to have fallen off, have still further declined, and the ground now opening out not being at present available a loss has been incurred; but the general prospects, which for some time past have been promising, continue to offer indications of an encouraging character. The discoveries which have been made from time to time during the last year and a half have hitherto disappointed the hopes anticipated by the runs of ore proving short and bunchy; but as similar characteristics have on previous occasions preceded a rich course of ore the committee still hope that a persevering development will achieve successful results, and this belief is strengthened by the important improvements which have occurred within the last few weeks; so that, notwithstanding the falling off in the tribute ground, the mine, as regards its future prospects, has not looked so well for a long period. A promising and productive lode has again come into Ivey's shaft, sinking below the 216. The 216, west of Ivey's shaft, has been driven 11 fms. on a productive lode. The 204, west of Ivey's shaft, has been driven 15 fms. through very productive ground, and the end is still rich. A winze sinking below the 204, and about 2 fms. in advance of the 216 end, west of Ivey's shaft, is down 5 fms., sinking on a very rich lode. Should the lode in the winze hold down to the 216, and continue in the end, a good mine may be speedily opened ont. The lode in the winze below the 162, west of Ivey's shaft, and 10 fms. east of Edwards's shaft, has been sunk 3 fms. on a very rich lode. The slide which came in at that point has been passed through, and the lode found to be very rich below it. Edwards's shaft, now almost squared down to the 162, will be resumed sinking in the course of next month; the skip has been brought down to the 162. Several cross-courses, presumed to be ramifications of the great eastern course, west of Edwards's shaft, have been passed through in the 152; it is expected the lode will be found west of that last passed through, and should it be cut as productive to the west as it was east of the cross-course the future prospects will be greatly enhanced. The laying out of this western mine has been very costly, and every effort is made to reduce the cost to the lowest point not detrimental to the efficiency of development. In conclusion, the committee can but express a hope that the adventurers will patiently await the result of the development of the western ground, which they hope will repay the present temporary interruption to the success which has attended the working of the mine during the last ten years.

The report of the agents was read, as follows:—

Sept. 27.—The 204 fm. level, driving east of Metal shaft, is on a lode 1 ft. wide, worth 1*l.* per fathom. Ivey's engine-shaft is sunk 9 ft. below the 216; the lode has much improved; the last 3 ft. sinking, now 18 in. wide, is worth 15*l.* per fathom; by the appearance of the ground, and the branches dropping in north of the lode, we look forward to a good improvement here soon. The 216 fathom level is driven west of this shaft 11 fms.; the whole of this drivage has been on a lode and branches from 3 to 4 feet wide, producing tinny work; the present end is worth from 15*l.* to 20*l.* per fathom. The 204 is driven west of shaft nearly 20 fathoms, and has passed through several rich bunches of tin; the lode now in the end is 3 feet wide, worth 40*l.* per fathom. We regard this as a very important point, being quite in unexplored ground. A winze sinking in the bottom of this level, 13 fms. west of shaft, and about 2 fms. in advance of the 216 end, is down 4 fms. 3 ft. This winze has greatly improved during the last few days, and is now worth full 30*l.* per fathom: this speaks well for the 216 end. A winze sinking in the bottom of the 162 fm. level, 10 fms. east of Edwards's shaft, is down 3 fms. 2 ft. below the level, and has just passed through the slide; the lode below the slide is 2 ft. wide, worth full 50*l.* per fathom; this also is a very important point, as there is no level up under this by over 30 fathoms. Edwards's shaft is sunk to the 162, and skip-road fixed complete to this level; we shall resume sinking below in the course of a few days. We are getting on very well in fixing the pitwork in this shaft, and shall be ready to work the engine by the end of this month. The 162 is driven west of Edwards's shaft 2 fms.; the lode in this end is at present poor; there is a good course of tin gone down in the bottom of the level above, a few fathoms west of this end. We anticipate an improvement in this end in 1 or 2 fms. more driving. The 152 end is now driven through the great cross-course, but we have not yet intersected the lode to the west of it; as soon as we get in settled ground we shall cross-cut north, where we expect to meet with the lode. We are sorry to say that our tribute department has greatly fallen off in the past quarter, hence our returns of tin are much less than was estimated at the last meeting, but we are glad to say that our prospects have much improved during the past month, in fact, our different points of operation have not looked so well for a long time as at present. —S. HARRIS, G. M. HENTY, JOHN JAMES.

The CHAIRMAN said the few remarks he had been in the habit of addressing to the shareholders for many years had been stimulated with a feeling of satisfaction, by reason of the mine having worked to a profit; and the present was the first time for ten years that there had been an interruption to its profitable development. At each meeting for a long time past he had pointed out the anxiety he felt as to the tribute ground lasting until new ground had been won. It would be remembered that at one time there was considerable impediment either at the west of Ivey's or Edwards's shafts, but lately progress had been made in driving and sinking, and within the last month, but more particularly the last fortnight, points had been reached of exceeding encouragement to the future prospects of the mine. In saying that he did not desire to raise expectations to any sanguine point, or induce the belief that by the next meeting their former position might be recovered; and, moreover, he thought it right to say that in opening out new ground it took some time before that ground could be made available for returns. While he personally felt assured of future success, he, of course, could guarantee nothing. He judged only by the congenial character of the ground, and the indications now presented, which, to his mind, were sufficient to justify him to look with renewed confidence to the future. (Hear, hear.) His friend, Mr. Divett, the largest shareholder in the company, holding 700 shares, usually accompanied him (the Chairman) in his visits to the mine, and during his last inspection, a few days since, expressed, if possible, a stronger opinion than usual as to his unabated confidence in the mine, and to its prospects of renewing its profitable returns. (Hear, hear.) But he (the Chairman) could give them no further encouragement than to take the mine as it is, with the assurance that the executive would do all in their power to push forward the development, trusting that the profitable ground would be met with before many probably expected. Their one great object was to develope the virgin ground west of Edwards's shaft, for if anything of importance were met with west of the cross-course it would very much enhance the value of the mine. He felt in a somewhat embarrased position upon the present occasion, although, perhaps, that was hardly a proper term—he felt it his duty to hold out such fair and encouraging prospects, while there was matter for depression, because the operations of the present quarter had resulted in a loss. He did not, however, want to be over-sanguine, nor to raise hopes that improvements would come earlier than might be the case. They could not alter nature, and they must take the mine as they found it. All were aware of the immense returns that had been made during the last ten years, and although the accounts now submitted showed an interruption of profit, he still looked forward to the eventual opening out of a long course of ore. He had been at the mine for the last month, and returned only on Monday; he had watched with great interest, day by day, the development of the mine, feeling the importance of the present meeting, and anxious about the returns. Their failure, if that was the right term, was with regard to their stopes, which had not yielded to the extent expected. He then proceeded to explain the different points of operation, stating that the great feature of their future was the ground which lay west of the cross-courses, or, rather, between the two cross-courses. All he, in conclusion, could say was that they would continue to develope the mine as energetically and economically as possible, and if they were not immediately successful he hoped the shareholders would have patience, and feel assured that the committee will carry on the operations with the view of promoting the best interests of the enterprise. (Hear, hear.) He then read the financial statement, made up to the present time, as follows:—

The audited cast account to July 31 showed a balance in hand of		£2670 18 8
Since which date there has been received—		
Tin sale, Sept. 10	2248 11 4	
Tribute and royalty on tin sold from Rosestaddon	67 3 9	
Sundries from the mines	13 15 7	
Tin sale, Sept. 27	1347 19 7	
Total		£6348 8 11
And paid—Cost for July, including merchants' bills	£2087 10 4	
Labour pay for August	1246 18 4	
Travelling expenses of deputation to the mines in July	12 10 0—	3353 10 5
Sundries, postage, &c.		6 11 9
Balance (cash and bills)		£2994 18 6
The actual account stands this day as follows:—		
Balance as above		£2994 18 6
Merchants' bills for August unpaid	£ 644 7 1	
Sundries, salaries, &c.	204 1 6—	848 8 7
Balance in favour of the mines		£2146 9 11

The CHAIRMAN added that he had heard it rumoured that a call would be made at this meeting, but the accounts showed that there were 2000*l.* in hand to carry them on, and before that was exhausted he hoped they might be enabled to return to their normal condition. Under the present circumstances the committee did not feel themselves justified in recommending a dividend.—A SHAREHOLDER considered that the committee had done perfectly right in not recommending a dividend upon the present occasion. He felt fully assured that everything had been done for the benefit of the shareholders.

The reports and accounts were received and adopted. The committee of management were re-elected, and Mr. Noakes was re-elected chairman and managing director. Mr. W. Moates was re-appointed auditor.

Upon the proposition of Mr. G. LAVINGTON, a unanimous vote of thanks was passed to the Chairman and committee of management, for their continued attention to the company's interest.

The CHAIRMAN having appropriately acknowledged the vote, mentioned that for the present their returns were uncertain—their stopes had fallen off, the quality being lower than formerly. They had been working their stopes for the last two or three years, but their new ground was now opening out good. (Hear.)

The meeting then separated.

LLANARMON LEAD MINING COMPANY.

A general meeting of shareholders was held at the London Tavern, on Thursday, Mr. W. CARPENTER in the chair.

Mr. H. CHAPMAN (secretary) read the notice convening the meeting.

The report of Capt. John Nancarrow was taken as read. It stated that the mine appeared to be on the eve of important improvements, such as will reward the shareholders for their outlay. The statement of accounts showed a cash balance of 927*l.* 17s. 10d.

The report of the directors was read, as follows:—

The statements of accounts and the special report by Capt. John Nancarrow, which have been printed and sent to each shareholder, comprise nearly all the information touching the position and prospects of the company which the directors have it in their power to communicate. According to the Articles of Association, as set forth in the prospectus of the company, published upon its incorporation, the capital was to consist of 10,000 shares of 2*l.* each, fully paid; but, as the directors had reason to hope that the sinking for the flat would be accomplished in the course of seven or eight months, they decided to issue only a moiety of the shares—*i.e.*, 5000—holding the other moiety in reserve, and not to issue them unless it should become necessary to do so. They are still unissued, and if it should be found necessary to issue any portion of them the directors will offer them to the shareholders at par—2*l.* each. It will be seen that the total receipts of the company have been 10,000*l.*, and the expenditure 9072*l.* 2s. 2d., leaving a credit balance of 927*l.* 17s. 10d. This statement represents the whole of the expenditure, including the incorporation of the company and preliminary expenses, the purchase of the mines and machinery (new and old), plant, buildings, &c.; there are no outstanding liabilities. The machinery, buildings, &c., on the mine have all been put in good order, and an additional engine and engine-house have been erected, and the whole has been rendered adequate to the carrying on of the workings to a considerable depth below the present level (the 92), including the workings between the 65 and the 92, where there is reported to be a considerable extent of ore ground. It will be observed that during the past twelve months no workings have been carried on on the great lode, from which there is reason to expect the realisation of very large profits, judging from what it produced from that part of it which was opened and worked by the Old Nant Mining Company, and also from the reports that have been made of it, after careful inspection, by competent and reliable mining authorities. That great lode has been held in reserve, operations having been confined to the sinking of a shaft, where we had the unanimous judgment of practical miners in the locality, as well as of others who had inspected the ground, in favour of getting down upon a horizontal deposit of lead, known in that district as a "flat," and which has produced considerable profits in the two or three mines into which it has extended.

It must be satisfactory to the shareholders to find that the judgment upon which the directors acted in this sinking was a sound one. At the depth of about 43 fms. the top of the flat was evidently at hand, and there were such positive and decisive indications of the proximity of lead, that Captain Nancarrow, who is proverbially cautious in venturing an opinion, or in hazarding a conjecture, has no hesitation in expressing his conviction that deposits of lead are close by. Capt. Ede, in a report made since Capt. Nancarrow's, says:—"The engine-shaft is now sunk 48 fms. below the surface; the last 3 fathoms sinking has been on the flat, but we have not yet reached the ore-bearing ground. We have in the bottom of the shaft a cross vein 2 ft. wide, which runs 35° west of north and east of south, and underlies north-east, very flat, dipping only 6 feet in a fathom. The heading or footwall is hard stone though jointy, being a mixture of chert and limestone, locally called bastard limestone. The hanging side is horse-clay, and the space between, which is termed the lode, is composed of congenial ground, of precisely the same character as that which usually attends the strongest deposits of lead ore found in the flat-bearing districts. We intend sinking on until we get down to the regular run of limestone before we drive out, as by so doing we shall be working safely, and proving the flat; we shall also discover east and west lodes, which, when found, we have every reason to believe will prove productive." Gratifying as is that report, however, your directors have received a subsequent and unsolicited report from Capt. John Pryor, who resides in the locality, who knows the ground here and in contiguous mines well, and who states that he was induced to visit the mine upon hearing that the back of the flat was reached. He says, writing on the 21st inst.—"Having business in the neighbourhood of the Llanarmon Mines, on Monday last, I visited your new shaft, and I cannot express to you how pleased I was to see the ground they were drawing out of the shaft. I have now greater confidence in the mine than ever I had before, as, in my opinion, whenever you intersect the flat you will cut it rich. I have always noticed that where the ground which you are now in overhangs the flat it is sure to be productive. It is my opinion that you have yet to sink 10 or 12 yards; and now that the weather is so very dry you should push on sinking with all possible speed. You will please excuse my taking the liberty of writing you, but having heard that the flat had been reached, and was unproductive, I felt an inclination to go and look at it, feeling sure that whenever the flat is intersected you will have a good mine."

The sinking of this shaft has been a work demanding great skill and caution, in consequence of the diversified and peculiar character of the ground, in some parts composed of decomposed gritstone, and therefore liable to collapse. This has also rendered the sinking a work of longer time than was first anticipated, and has considerably increased the cost. The work has been accomplished, however, without accident, and the shaft is of such dimensions, and has been so thoroughly secured with timber and iron, that it promises to endure for many years to come, and to be the channel through which large and profitable returns will be made.

Meanwhile, the machinery and the engine at the east shaft, which has been sunk 92 fms., have been put into an efficient state to recommence the workings there, whenever it may seem desirable to do so. On this part of the mine, indeed, several miners who, knowing the ground, and being satisfied that it contains good deposits at a shallow depth, are working upon tribute, and are making returns of lead. Capt. Ede says "When these men commenced no ore could be seen, but they had great confidence in the place, for they have cleared 35 fms. through attle—old men's workings; and now they have got to some very good ore in places, but they have not yet reached the main point, which they have been informed of by their forefathers. It is likely that we shall ultimately open up ground here which will return very considerable quantities of lead ore." In all respects, therefore, the directors have reason to believe that the shareholders will feel gratified upon a review of their position and prospects. The directors have sedulously discharged their trust, watching from month to month the operations at the mine, and offering such suggestions as seemed to be called for, in which they have been materially aided by the practical knowledge of the secretaries. In conclusion, the directors repeat the conviction they originally entertained, that the Llanarmon Mines will soon realise the expectations that were formed of them, and become a source of considerable profit for many years to come.

The CHAIRMAN said that the report entered so fully into the position and prospects of the mine that little, if anything, was left for him to add; therefore, he would content himself by simply stating that the directors were more than ever satisfied as to the great mineral value of the mine, and to the early realisation of successful results. With those few remarks he would move that the report and balance-sheet be received and adopted.—Mr. MATHESON seconded the proposition. He considered the report very satisfactory, and one that could not fail to be most re-assuring to all associated with the company.

Mr. CHAPMAN said that since the report was written a favourable and important change had taken place in the character of the ground at the shaft. There was an undivided opinion among all practical men in the locality that when the flat was opened upon Llanarmon would at once take a prominent position among the leading lead mines in Wales. It was admitted on all hands that it was one of the best pieces of mineral ground throughout the district, and that there was no possibility of its failing to prove a most successful venture. He had the best authority for stating that had it not been for the extremely loose character of the ground through which the shaft had been sunk, which had caused delay and incurred a large additional expenditure, the great "flat" would have been reached before this time. The work had been one of great engineering skill, and it had been carried out with perfect success and safety; and he had no doubt the ground that would thereby be developed would open up a rich mine.

Mr. MILFORD reminded the shareholders that this new shaft had been sunk 50 fms., and that every indication was present that the "flat" would soon be reached. But in addition to this important point there was the old mine, which had yielded great riches.

The CHAIRMAN said that in the old part of the mine everything was in perfect order, whenever it was thought desirable to commence operations; but it had been deemed judicious to confine attention for the present to the work in connection with the new shaft, where the indications were of such great promise.

Mr. CHAPMAN said that, although the company had been working the mine for only 12 months, this new shaft had been sunk 50 fathoms—a work which in Cornwall would have taken years to accomplish.

A SHAREHOLDER asked how it was proposed to raise further capital, if it should be required?—The CHAIRMAN said that if such a step should be deemed necessary, a portion of the unissued shares would be offered to the proprietors.

Mr. BARTLETT said that if this "flat" were reached further capital might not be required. Of course, the object of the directors was to keep the capital within the smallest possible limits.

The CHAIRMAN said it was hoped that the balance in hand would last about four months, and be sufficient to prove the "flat." Capt. Pryor, who has practically known the district for many years, but is in no way associated with this mine, had expressed an unequivocal opinion that it was impossible to fail, looking at the success attending the development of Minera and the surrounding mines. Captain Pryor, he added, worked in Llanarmon 25 years since, and, therefore, his opinion was entitled to respect. There were three or four very material points to be realised in the old mine, each of which possessed its own peculiar importance. It was not too much to say that few mines had such primary features for the ensurement of success, and he only hoped that before the next meeting something of importance would have been realised, forming a solid ground for satisfaction and encouragement.

The report and accounts (as certified by the auditors) were received and adopted. A vote of thanks to the Chairman and directors concluded the proceedings.

THE NANTY LEAD MINING COMPANY.

The first general meeting of shareholders was held at the offices, Great Winchester-street, on Wednesday,—Mr. WILDY in the chair.

The notice convening the meeting was read.

The report of the manager was read, as follows:—

September 26.—I beg to send you the following report to lay before the meeting on Wednesday next, as I cannot myself attend. Since the formation of the company the whole of the deep level has been cleared, securely timbered, and the rails laid down through the whole of the works. A lodge cut for placing the engine underground, close to the top of the shaft, and pumps ready for putting down to unwater the 10 *fm.* (or deepest) level, under the adit, and thus enable us to work on the bunch of ore gone down in the same, and we are now only waiting the completion of the outside machinery to prepare a parcel of lead for market. On the dressing-floors we have been pushing the works with all dispatch, having as many carpenters as can work at it, in making and fixing riggers, launders, and all other requisites for dressing the ore, as well as putting in bearers, flooring, &c., to crushing-mill, and we are now expecting the foundry work of crushers, &c. We have a good deal ready for the mill, and could now send out a very large quantity of stuff by tram-wagons. I have also purchased an engine (new) ready for drawing the water from the 10 fm. level. But what I would just now call your attention to is a discovery of good ore made in the deep level. In widening and cutting the bottom and sides of the level to lay down the rails we cut into good ore, which the last workers had passed without seeing, and, from what I can see, it is a continuation of the very good ore (had above) going down, which the last party lost just at this point. At any rate, I am justified in saying that the shares are now worth double what they were a month or six weeks ago. You may rely on my doing my utmost to facilitate matters by bringing ore to the market, so as to still further enhance the value of the property.—W. LEFEAUX.

The CHAIRMAN said that the capital had been fully subscribed, and the works had been in active operation since the date of the incorporation of the company (July 4). The directors had every confidence in Mr. Lefeaux's judgment, and every reason to believe that within one year from the formation of the company a dividend would be paid to the shareholders. The mine had been acquired at such a moderate rate that even a moderate success would amply repay the shareholders, and that there was every ground to believe would be achieved as soon as the whole of the machinery was in working order. The present meeting was purely formal in its character, being held pursuant to the provisions of the Companies Act, but he hoped that the next time he met the shareholders he should have to congratulate them upon the realisation of a substantial success.

After some discussion, a vote of thanks was passed to the Chairman and directors, which terminated the proceedings.

VAN MINING COMPANY—MONTHLY REPORT.

Sept. 27.—Edwards's Engine-Shaft: The level east from this shaft has been driven 10 fms.; set to six men, at 85s. per fathom. The 45 fm. level has been extended west of cross-cut 5 fms., through ground worth on an average 15 tons of lead ore per cubic fathom; set to six men, at 140s. per fathom. The 30 fm. level was driven 4 fms. this month; it is now 59 fms. west of engine-shaft; for the width of the level the lode is worth 8 tons of lead ore per cubic fathom; the ground is very spare for driving; set to six men, 4 fms. stent, at 160s. per fm. Set to six men to drive a level eastward, on the north part of the lode, starting from a point 26 fms. west of engine-shaft, at 140s. per fathom; the lode here for the width carried is worth 4 tons of lead ore per cubic fathom. This month we shall start a new stope, to be called the 24 fms. stope, in the back of the 30 fm. level, west of engine-shaft; set to eight men, at 65s. per fathom. The 16 fm. stope ditto is set to eight men, at 67s. 6d. per fathom. The 8 fm. stope ditto is set to eight men, at 67s. 6d. per fathom. The lode in these stopes is on an average 27 ft. wide, worth 75 cwts. of lead ore per fathom. The 8 fm. stope, in back of the same level, east of engine-shaft, is set to eight men, at 65s. per cubic fathom. The 16 fm. stope ditto is set to eight men, at 67s. 6d. per cubic fathom. The 24 fm. stope ditto is set to six men, at 70s. per cubic fathom. The average width of the lode in these three stopes is 18 ft., and produce 3½ tons of lead ore per fathom. Set six men to drive a cross cut south from the before-mentioned 16 fm. stope, at a point 14 fms. east of engine-shaft, 3 fms. stent, at 100s. per fathom; also set the same pare of men to put up a rise from the said cross-cut to the 15 fm. level, for getting stuff to fill up the stope, at 80s. per fathom. The 15 fm. level is now extended west of engine-shaft 128½ fms.; this pare of men have also put up a rise in the back of the level 6 fms., to meet the 120 fathom winze from the adit level, which will be communicated in about nine days; this will secure good ventilation for them in driving the level westward. The level is set to eight men, at 80s. per fathom. The distance between this end and the level from Edwards's shaft yet to be driven is about 50 fms., which I expect they will spend in about three months from this date. The 70 fm. stope, in the back of this level, west of engine-shaft, is set to eight men, at 70s. per fm. The stripping down of the lode to the full width at the side of the level, east of said stope, is set to eight men, at 95s. per fm. The average yield of the lode at these two points is 3 tons of lead ore per cubic fathom. The 54 fm. stope to four men, at 65s. per cubic fathom. The 44 fm. stope set to six men, at 80s. per cubic fathom; the average width of the lode at these two points is 52 fms., and produce 4 tons and 2¼ tons per cubic fathom respectively. The 15 fms. permanent level, driving west of engine-shaft, is set to six men, at 100s. per *fm.* A cross-cut south from the permanent level, opposite the engine-shaft, to come under the new engine-shaft, is set to six men, at 105s. per fathom. The 16 fms. stope, in back of the 15 west, is set to four men, at 65s. per *fm.* The 8 fms. stope ditto is set to four men, at 65s. per cubic fathom. The lode in these stopes is 12 ft. wide, worth 1 ton of lead ore per cubic fathom.

The 15 *fm.* level, east of engine-shaft, measures 56 fms.; it is now driving by the side of a productive lode, which as far as seen is worth 2 tons of lead ore per cubic fathom. This shows an improvement upon the adit, as nothing was met with in that level at that point; set to six men, at 80s. per fathom. The 8 fathoms stope in the back of this level is set to eight men, at 70s. per cubic fathom. The 16 fathoms stope in the back of this level, set to eight men, at 70s. per cubic fathom. The 24 fathoms stope in the back of this level, set to eight men, at 65s. per cubic fathom. The average width of these stopes is 23 ft., and produce 25 cwts. of lead ore per cubic fathom. The 16 fathoms stope, on the north part or heading of the lode, is set to eight men, at 57s. 6d. per *fm.*; width about 8 ft., worth 1 ton of lead ore per cubic fathom.—Deep Adit Level: The 120 fathoms rise to surface is up 10½ fms., set to six men, at 110s. per fm. We expect to hole to surface in about a month, which will be the means of thoroughly ventilating the western part of the mine. The deep adit level, east of engine-shaft, is extended 133½ fms.; set to six men, at 90s. per fathom. Set to four men to drive a cross-cut south from the top of the 24 fms. winze, in the side of this level, which will supply the 24 fathoms stope with stuff to fill up, and also enable us to communicate with the permanent adit level, east of shaft, at 100s. per fathom. Set to four men to drive the permanent adit level, west of engine-shaft, at 90s. per fathom. The new engine-shaft is down 8½ fms. Set to six men the filling of all the ore stuff into kibbles at the lodges, at 3s. 6d. per score tram loads.—Surface: On the new floor this month's erections comprises the following:—Six common jiggings, three triple compartment German jiggings, one propeller buddle, two flat buddles, sheds over all, also all necessary trunks, &c. The enlargement of reservoir is progressing favourably. The new stone-breaker has arrived, also the boiler for the Prince of Wales engine. The machinery is in good working order.—W. WILLIAMS.

GWYDYR PARK CONSOLS—SPECIAL REPORT.

SIR,—In conformity with your request, I proceeded to the above mine, and made a careful inspection of the property, both at surface and underground, and the following are my observations thereon:—

GWYN LLIFION.—Sutton's Shaft: This shaft is sunk on the intersection of the main east and west lode, and a north and south lode, and is communicated with the deep adit level. On this north and south lode there are at surface extensive old workings, no less, I should think, than 40 fms. in length, and many fathoms in depth. This lode, as seen in the shaft, is well defined, and contains some good lumps of lead ore. There is a level driven west on the course of the other lode, from which a nice pile of lead has accumulated at the top of the shaft. There are men employed stoping both the back and the bottom of this level, the former having a branch of lead 4 in. wide, and the latter much larger. The facilities for working this ground are very great, being close to the shaft through which the stuff will be thrown down, and trammed afterwards to the mouth of the level to be dressed, so there will be no expense of hauling or carting the stuff to the dressing department.

DEEP ADIT.—This is driven from the foot of the mountain from the Gwydyr Park Lake in a north-westerly direction, until it cuts the east and west lode alluded to above, and is afterwards driven on the course of that lode as far as Sutton's shaft. By the driving of this level no less than six well-defined lodes have been intersected. The first is known as the Red lode; this is driven on for a few fathoms, but could not be continued for want of air. On this lode, a little beyond the present end, a shaft is sunk from surface, which would be down to that level by 12 or 13 fms. more sinking; this is Newton's shaft. About 20 fms. further another lode is intersected, in 3 or 4 fms. another, and in about 2 fms. more another. Neither of these three have been driven on, for want of air. In driving 20 fathoms further they cut another lode, known by the name of Owen's lode; this lode is 3 feet in width, and well defined; it is driven on towards Owen's shaft 4 or 5 fathoms. From the large amount of workings that there are at surface on this lode, I should judge that they must have extracted large quantities of lead, and at a good profit, as I was informed that it was worked solely by labouring men, who had no capital to work on, and had a tremendous spring of water to contend with in order to get at the ore which they raised; and, finally, they were driven away by the water altogether. Such being the case, we may reasonably suppose that there is now in those old bottoms lead yet remaining, which can still be worked at a profit, provided the workings could be drained of the water. I am decidedly of opinion that the continuation of the end from the adit level towards Owen's shaft would complete that object, as the lode is inclined to let down water, being of a porous nature. In the event of this failing to drain Owen's shaft, there is a portable engine on the ground, and pumps ready, which can be made available. But, at all events, I should strongly recommend the communication of Owen's shaft with the adit level, as in all probability you will have permanent stoping ground, dry and ventilated. There is nothing done in the adit level, on the lode in which Sutton's shaft is sunk; I mean the north and south lode, known as the New lode; and the lode on which the adit level is driven is not wrought on below the 8 fm. level, where they are now stoping at a profit. To the west of Sutton's shaft there are two other north and south lodes; on one there are also extensive workings at surface. I should think that from this, as well as the other lode, they must have had lead in paying quantities, or else they would not have worked in the manner they have. There are in all eight north and south lodes, and the whole have been wrought on more or less at surface, and some, as I have before stated, must have yielded large quantities of lead; and I have no hesitation in saying that those lodes are likely to prove productive in depth, as they contain the elements necessary for making them rich lodes.

GWYDYR.—After having gone over the surface several times, and examined carefully the plans, I proceeded underground by way of the Cadit shaft, which I believe is about 10 fms. deep. This is sunk on the course of a lode said by some to be Vucheslas lode, but it is not my opinion, as the direction is not the same.

It appears to me to be altogether another lode, and from its bearing I should suppose that it would form a junction with Harker's lode at the same point that that lode (Harker's) unites with Harkers' heading, as may be clearly seen in the plan; this is a strong lode, and very well defined, containing a mixture of quartz and carbonate of lime, with beautiful gossan. In proceeding through the adit a little way we came to a large course of shale, known as the shale lode. I do not think that this lode in itself will prove very productive, but it will most likely support other lodes that come in contact with it, as such has been the case in other mines that present the same kind of phenomenon. The level is driven on this course for a great distance, and in the present end there is a lode (which I consider to be distinct from this) 3 ft. wide, composed chiefly of spar, and some good stones of lead scattered throughout. On approaching Harker's lode the adit has intersected another lode, unknown to anyone before; this is about 1 ft. wide, and is worth from 10l. to 12l. per fathom for lead. I saw one mass of lead blasted down from here just as much as one man could turn over. We came at length to Harker's lode; there a new shaft has been sunk on the course of the lode, and communicated to the new adit level; at the botttom of this shaft there are stopes which are now being worked producing about 12 cwts. of lead per fathom. To the west of this point this lode has been worked on very extensively by the old workers. It appears that they went as deep as they possibly could with the water, and there is no doubt that now the new adit is up to that place that you will have good stoping ground. If they could work the ground at a profit, and drain the water by manual power, you would make a far greater profit now the ground is dry, supposing you have the same amount of lead. About 20 fms. to the west of new shaft, known as Johnny's shaft, there is the junction of what is called Harker's heading, with Harker's lode: there is not the slightest doubt that here you will have a rich and lasting deposit of lead, as there are no less than three lodes that converge to the same point; and if analogy or appearances are any guide, or worthy of any consideration whatever, we can but expect at this point results equal to the most sanguine expectations.

Vucheslas.—This is a piece of ground between the Gwyn Llifion and Gwydyr, commencing near Johnny's shaft. In the latter the lode is north and south, 3 ft. wide, and well defined. On this lode there is a level driven from the foot of the mountain, and extended south somewhere about 40 fms. A great deal of ground in the back of this level has been worked away from shallower levels driven from the hill side. On extending the present deep adit you will have, I should say, at least 80 fms. of backs, and by bringing up the old adit from Gwydyr, which is now no very great distance, you will add from 10 to 15 fms. to the depth of Harker's Mine, 30 fms. to the depth of Vucheslas, making the latter 110 fms. deep, without requirements of any pumps, and but little drawing machinery. In addition to the lodes I have named, there are, no doubt, many others not yet discovered. The whole of Gwyn Llifion lodes must traverse the Gwydyr part of the mine, and intersect the east and west lodes, and form junctions with the caunters: and, if we take such phenomena to be any indication of productiveness in lodes, we have every reason to expect that in this mine there will be very large and lasting deposits of lead.

In conclusion, permit me to say, that I have never seen a more *bona fide* mining property than this. If you do not meet with success it is not because you are void of preliminary evidences, you have them on every side. Your lodes are sufficient in number and size; they traverse the sett in all directions, and form junctions and intersections at all points. The matrix of the lodes is quartz, carbonate of lime, iron pyrites, blende, and other minerals common in lead lodes. I have now laid before you the facts as they presented themselves to me in passing through the mine, and on examining the plans I will make no further deductions, but will let those who may read these facts draw their own conclusions as to the nature and value of the property.

John Roberts.

Penygroes, near Carnarvon.

The Royal School of Mines, Jermyn Street.

Mr. WARINGTON SMYTH'S LECTURES.

[FROM NOTES BY OUR OWN REPORTER.]

Lecture LVII.—I have now (said Mr. Smyth) a part of the subject of mining to bring before you which may be considered a sort of appendix to working out the minerals from their natural localities, and subsidiary to those processes which I have already described, by which coal and metallic substances are won, and ventilation of the mines secured. The subject of the mechanical preparation of minerals is one which naturally attaches itself to the operations of mining, for various reasons. In the first place, most of the ores raised to the surface from the bowels of the earth are in a state unfitted for the operations of the smelter, or the requirements of the metallurgist. It is, therefore, found necessary to separate to some extent the metals from the impurities with which they are associated on the spot where they first see daylight before they can be sent to market. This is a convenience to all parties concerned. As the mines are usually situated in districts where there is water-power applicable to the processes of crushing and stamping, a great deal of water is required for the separation of the minerals from their attendant impurities by washing and other processes, which is generally easily obtained. Again, the rate of wages is generally lower in mining districts than in the manufacturing localities to which the ores are sent; and the miners are, generally speaking, thoroughly conversant with what is waste, and the modes of getting rid of it. Then, at the mines there is frequently and unavoidably steam or water-power to spare, which may be cheaply applied to the dressing processes.

Another reason is to be found in the simple fact that it would be manifestly an uneconomical process to carry away from the mines to any considerable distance all the worthless material with which the ores are mingled; and this is especially the case with the metals of great intrinsic value obtained from masses which have but a small percentage of good material. In other cases, such as the ores of zinc, silver, lead, &c., there is so large a proportion of impurity in their substance that they have to be worked up with great care in the process which is technically called "dressing" (German, *aufbereitung*). That term indicates the whole series of processes between the pit's mouth and the place where the ore is stored up for the purpose of going to market. The processes themselves are in kind and character very much akin through the whole series. The dressing of minerals, whether gold, silver, copper, or even some of the non-metallic substances, as, for instance, coal, which of late years has been subjected to operations of a similar nature, has in all cases the same object. The rougher and larger encumbrances are, whenever it is possible, separated in the mine itself, then the remainder is sorted at the surface as to size, then as to specific gravity, generally by the action of a stream of water, either natural or artificical; while in a great majority of cases the heavier substances have to be crushed and triturated, in others, like china-clay, which is composed of decomposed granite and mica, the impurities are washed away in its passage by water through a succession of pits. In the case of coal, a similar separation takes place of all the shale or pyrites with which it may be mixed, and which would unfit it for household use. There are a few points to be passed under review as regards the general run of ores of intrinsic value so low as not to allow these processes to be employed on them to any great extent. In the first place, much depends on the nature of the impurity. It may be quartz or felspar, which may be knocked off very well and easily; but if the impurity be mingled in small specks or particles through the whole substance, then it becomes a different matter. Thus, in a specimen of brown hematite (exhibited), containing throughout its whole mass small specks of quartz, that fact renders it of no practicable value at the present price of iron ore. If the price were 8*l.* or 9*l.* per ton, then it might be worth while to deal with it. If we come to the case of lead ore, which it is neccsary to dress to a product of 70 per cent., we shall find that if its price is reduced much below the present figure many ores would cease to be remunerative. In these operations room for a great number of apparatus is necessary, and a supply of water indispensable, which makes it advisable to look out before sinking the shafts whether the locality is provided with these requirements. In the case of copper ore, it is found from the peculiarity of the smelting processes to which it is subject that it is necessary to dress to a very high standard. On the Continent they dress the ore to a much higher percentage than in England. Tin ore varies exceedingly in value, but if 1 per cent. of good saleable tin be obtained from the tinstuff that is considered good, although in Cornwall they go much below that, and consider it fair. In lead ores much depends upon whether they contain any proportion of silver, as when that is the case ores which look exceedingly poor are worked, and which would not be traced if they were only ordinary lead ore. When we come to gold it is remarkable what a vast amount of material is turned over with the result of obtaining only a very small proportion of the precious metal. In Hungary these processes are carried further than anywhere else. If I were to say that to obtain 1 oz. of gold from a ton of refuse it will pay, such a statement would seem incredible; but in Brazil, from whence a large quantity of gold is obtained, ⅛ oz. to the ton yields a handsome return, and ¼ oz. is considered there sufficient to pay. This is exceeded at Schemnitz and Cremnitz, in Hungary, where gold mining has gone on for centuries, coupled with a low rate of wages and unlimited water-power, and where the produce is but 2 ozs. to 50 tons of material. At Zell, in the Tyrol, the proportion is about the same; some of the stuff—a slaty lanweike—is worked, although it only produces 2¾ dwts. per ton. This is probably the smallest proportion obtained from any material actually worked, and it is obvious that great economy must be used in the processes employed.

Let us now take a glimpse of the machinery employed in dressing. First of all we must remember that the valuable mineral comes out of the mine either in blocks, coated with mud and slime, so that it is difficult to see what it is composed of, or in smaller pieces which it may be convenient at once to sort, and a kind of rough separation precedes almost everything else. When the ore comes to the surface it is conveyed to the place where there have been established proper dressing-floors, according to the nature of the mineral to be dealt with, and according to the magnitude of the mine, covering in some cases many acres. This is the case with most of the lead ores in the North of England, some of which are rich in silver, and in Wales, especially in Cardiganshire, where the dressing is carried out with great minuteness. Some of the tin mines in Cornwall also have dressing-floors which extend over a large area, and where the tin is so disseminated through the stone that a great amount of refuse has to be got rid of, and when, if they secure 1 ton of ore to 100 tons of rubbish, they consider they do well. In the districts of the Harts, in Hungary, at the calamine workings at Altenberg, near Aix la Chapelle, and the Vieille Montagne Company's mines will be found fine examples of this nature. If the works are to extend over a considerable area, it is a great advantage to place them upon sloping ground, which will greatly facilitate the application of water for cleansing the ores as well as for working the machinery. Laying out the floors is a point which requires a considerable amount of experience if it is to be accomplished in the best way. At a mine with which I am acquainted in Cornwall it was found necessary to alter the dressing-floors, an operation which absorbed at least 10,000*l.*, all of which might have been saved by the exercise of better judgment when they were first laid out. It is important, then, to place them so as the yield increases the dressing-floors may be enlarged without unnecessary cost. The fall must then be divided at various stages so as to utilise the water power, and pass on the material from one stage to another. Then it is a matter for consideration whether the material will require crushing, stamping, or grinding, and, therefore, what is the nature of the machinery to be employed. When the climate is rough, as in the Hartz and in Norway, the machinery will have to be protected by roofing. The arrangement must provide for the material to be constantly passed down hill, as if there should be heavy loads to carry up hill the dressing will cost more than it ought to do. I do not know a more remarkable example of excellent arrangement than that furnished by the dressing-floors at Clausthal, in the Hartz. The mines once belonged to the British Crown, and were in a declining state, but within the last few years a struggle has been made to keep up their old reputation by driving several long levels, and the erection of a series of most magnificent dressing-floors, with every appliance and convenience—the finest in Europe. The cost of erecting them cannot have been far short of 50,000*l.* or 60,000*l.*, and that only for a part of the mining district of Clausthal. The stamps, crushers, and apparatus are of the best and newest descriptions. When there last summer I took a note of the quantity of ore got through. They reckon by "trieben," each of which represents 288 cubic feet, or 11 tons English, and I was told that they worked up 5000 trieben, or 55,000 tons per annum; but I believe they are now doing about three times as much.

Another point to be considered in making arrangements for dressing is whether the ore to be dealt with will deteriorate by the action of water and of the atmosphere. Some substances begin to deteriorate as soon as they see the light. Of this kind is the well-known and somewhat abundant black copper ore, which if only exposed to the rain for a day or two will lose a considerable amount of its value. These ores require to be placed on one side, and treated by processes in which water is absent.

The ore is generally separated into four divisions. The mass is broken by a sledge hammer, which is called "spalling," and then passed over a grating. The richest copper ore is placed on one side, and will require no further preparing for the smelter. It is then called "prill," or clean ore, or best ore. In the North Country it is called "bing ore," from being sold in bings of 8 cwts. each.

The second class consists of ore which is more or less mixed with impurities which have to be removed. In a specimen of green copper ore (exhibited) there may be specks of red oxide and other indications of value, but so mixed with quartz and other substances so as to render it unfit to go to pile or the bing shed. Ores of this kind are called "dradge," or "knockings," or "dash work."

The third division is an inferior variety of, we will say, schistose material, and full of pyrites, chiefly iron, but here and there copper pyrites. These require the application of water, and unless they are dealt with by some economical power or operation, they often will hardly pay for the labour and pains bestowed upon them. They are usually termed "halvans." This word is to be distinguished from "elvan," which means a porphyritic substance occurring in dykes or veins.

That portion of the material which contains no ore at all is called "attle" or "deads." It is raised with the ore, and will have to be separated from it as easily as possible in the dressing, as it becomes more difficult to pick it out of the more valuable material when the latter is reduced to a small size, or as in some cases to a fine powder.

There are other terms which relate only to size, such as "beans" and "peas," which sufficiently indicate their meaning, and others still smaller and more minute, which are classed differently in different places; but if some easy definition according to size can be applied it is a great point gained.

The first thing done is to run the ore into a kind of receptacle, where it may be kept until the men are ready to work up that particular class of ore—as, for instance, a pit or a hopper, with a strong wall in front, and a sloping surface below. The wall has a door at its lowest point, and attached to it an inclined trough, through which when the door is opened the material passes down by its own weight, one or two persons standing by with rakes to assist the fall, and to sort out in a rough way any lumps of material which are obviously valueless. In its passage it is washed by the action of water brought to bear by means of a pipe. The necessity for this differs greatly. If they have a clean sparry rock, of sandstone or fluor-spar, or quartz, very little water will suffice, but if they have to deal with tinstuff composed of soft killas, the material comes out so caked over with dirt as to require the impact of a considerable body of water so as to be able to see what it is. Then the larger pieces are examined, and thrown right and left into wagons or barrows, while the smaller portions fall through, and so are carried away by the stream, to be further dealt with. In this way separation is effected. The larger lumps are then taken to be "spalled"—that is to say, broken up with sledge hammers, which are used with great skill—and submitted to mechanical stone-breakers, which do admirable service. The action of the grating may be greatly assisted if the material be discharged into a revolving riddle. This is an implement which is brought into play in a great variety of different stages in the dressing processes. If the material be very subject to mud and slime, then some modification is desirable, and to this difficulty a conical drum washer is used. The material is turned into the inner portion, composed of strong iron bars, and the drum being set in motion by a water-wheel, the finer parts will fall into the outer diameter, and the larger portion deposited in another place. A very small amount of power will drive a machine of this kind, and at the same time it will get through a large amount of stuff. Two men with 1½-horse power will in 12 hours get through from 10 to 15 tons, which will be thus thoroughly washed and sorted according to size. Many plans have been devised for washing the ore. The common mode in early days was to throw the stuff into a pool of water, but that involved an expenditure of labour which cannot now be thought of. A plan much used in Transylvania was to pass the material through a succession of sieves, in which a large rake was turned upon a centre, and stirred the contents of each sieve, the bars of which had openings of different sizes.

It has of late years been found necessary, in order to get the higher price for coal of the best qualities, to have it screened. There are many varieties of coal, so tender that it would go very much against the sale if a great deal of dust and small were mixed with it. It is, therefore, necessary not only to sort for domestic purposes the round coal from the smalls, but to do more than that. Gridlles are, therefore, now contrived, by which the coals are thoroughly sorted according to size, the smaller being called "nuts" and "peas," and the dust is termed "duff."

PRACTICAL TREATISE ON MINE ENGINEERING.

There is, probably, nothing of greater value to the practical man than a knowledge of the obstacles that have been met with by those engaged in a similar business to himself in the same locality, or where the conditions are similar, and of the manner in which those obstacles have been dealt with, for he is thus enabled to follow the same course so far as the experience gained has proved it to be worthy of following, and to improve upon it where it has been ascertained to be defective. It was to provide the mining engineer with knowledge of this kind that Mr. G. C. Greenwell's well-known work* was originally written; it was intended, as the author tells us, to be a practical book, not only to instruct the beginner in the art of mining, but to aid those who are more conversant with it in the execution of mining work, and the extent to which he has succeeded in the attainment of his object may be judged of by the fact of his having had the gratification of learning that works have been successfully laid out and executed in accordance with the recommendations contained in his book. In the new edition the author has taken the utmost advantage of his 16 years' additional experience, and brought the information down to the date of publication, yet the plan and object of the work have not been in any degree altered.

In the first chapter, wherein he treats of the application of geology to mining, he shows the several formations in which coal and iron-stone are to be found, and supplies several important sections of coal formations in elucidation of the subject. He tells us that it was in the Bristol coal field and its neighbourhood that the celebrated Wm. Smith, the father of English geology, first practically proved the correctness of his geological views as to the uniform order of superposition of the rock formations, and demonstrated the soundness of that magnificent system which has since been adopted by men of science over the entire globe. In the second chapter he treats of building slate, bricks, and lime, whilst dykes, slips, faults, mineral veins, and internal heat form the subject of the succeeding chapter. This chapter cannot fail to prove of immense value to practical men, as it affords them every opportunity for thoroughly studying the subject. Referring to the subject of internal temperature, he says that if we admit that the earth has a proper temperature due to itself, and at the same time take into consideration the feeble conducting power of the substances near the earth's surface, we cannot avoid the conclusion that it is impossible by the method hitherto pursued to fix with any certainty upon the mean rate of the increase of temperature as we descend (the usual mode of conducting such experiments being to divide the depth in feet by the difference in temperature between the point of observation underground and the mean temperature at the surface, sometimes deducting from the depth the supposed depth of surface mean temperature (say, 50 ft.); because if we take a line of equal distance from the centre of the earth sufficiently distant from the surface to be quite unaffected by solar radiation we should at this depth (unless affected by other causes) have the temperature isothermal. His tables and data show the absurdity of the conclusions that have been arrived at.

In the next chapter boring and sinking for coal are described. Referring to the "dowsing-rod," he quotes Pryse ("Mineralogia Cornubiensis"), to show that "the first inventor of the virgula divinatoria was hanged in Germany as a cheat and impostor;" and he adds that Pryse himself seems to have had implicit confidence in its virtues. The virgula is in the Mendip Hills district firmly believed in, but the virtue is, he thinks, more generally suppose to rest in the dowser himself than in his rod; there *may* be some delicate organism in some persons which *may* be affected in some ordinarily incomprehensible manner by these "effluvia," as they are called. Mr. Greenwell has seen the rod used, and has seen it turn and point downwards, apparently without the will of the operator, where mineral veins were certainly probable, but whether there was a vein or not at the identical spot was not investigated. The dowser was blindfolded, and led again and again with proper precautions over the spot, and the rod then twisted his hands forward until the single end from being held upwards pointed vertically downwards; and certainly, so far as he could judge, without any attempt at deception on the part of the operator. In subsequent chapters he treats of strength of materials, the various systems of working mines and minerals, the illumination and ventilation of mines, and of mine accidents.

From the character of the work it is, of course, impracticable to give an epitome of its contents, but we may safely say that it contains as much practical information as the mine officer who has acquired, or intends to acquire, by experience in the mines some knowledge of the details of his business could desire, and that the information is given in a style which will enable him without difficulty to apply it to the utmost advantage whenever he may require it. The volume is enriched with a large number of beautifully executed chromolithographs, and forms as handsome a volume as an engineer's office could boast.

* "A Practical Treatise on Mine Engineering." By G. C. Greenwell, F.G.S., M. Inst. C.E., &c., Colliery Viewer. Second edition. Newcastle-on-Tyne: M. and M. W. Lambert. London: E. and F. N. Spon, Charing Cross.

MINING NOTABILIA.

[EXTRACTS FROM OUR MINING CORRESPONDENCE.]

What had been predicted as the consequences of the late exodus of the miners from the county of Cornwall has been verified, a scarcity of experienced practical men has been felt in many districts, labour unskilled may be had in plenty, but at greatly advanced rates; but the old-fashioned tributer and practised tinmen are not procurable, whilst good timber and shaft men are extremely scarce. The local journals have frequent advertisements of tinners wanted, timber men wanted, &c. It was no wonder men emigrated when their wages were cut down below starvation point, or to about 30s. to 40s. per month, at a time when all the necessaries of life were at advanced rates. We have heard it stated that skilled labour may be had in plenty; if so, how comes it that men do not reply to or apply to such invitations as we allude to? Mechanical appliances must be resorted to, a good thing for the proprietors of such machines as Blake's stone-crusher, &c. The activity of Cornish engineers must be again called on to remedy the evil complained of, especially for surface work. The new Pneumatic Stamps will probably be a great boon, as by a trifling cost in fuel a vast amount of material may be got through in a short time. A set of these new appliances are to be fixed and put to the test on an extensive tin mine in Cornwall in a few days. Many experienced mine agents and engineers will be in attendance to witness the performance: there will, doubtless, be a variety of opinions expressed, dictated in some instances by interest or conviction. Amongst others the managing director of the Terras Tin Mine has left to see how the stamp acts, as it has been suggested by the patentees that instead of erecting 152 additional heads of stamps, as proposed, 15 or 20 of the new pneumatics will be equivalent: should this be effected a large saving will be secured. We shall watch the trial with great care, and report thereon. The agent from the Terras writes, "We cannot get men for spalling, so you must provide two of Blake's crushers." There is also one about to be erected as soon as possible.

Virtuous Lady.—Another such a rich and promising lode as is now being driven upon in the shallow level cannot, I believe, be seen in the two counties, search where you will for it; and in the deeper cross-cut in another month, or perhaps less, it is expected, I hear, to cut this same lode. It is not prudent to "count chickens before they are hatched;" therefore, I simply say, wait and see the actual results. However, my opinion is at once formed that Mr. Barnard will now soon triumphantly prove to the world how correct his judgment upon this property has been. I wish him as much success as he deserves; and surely he is a credit to the mining world, for he has decidedly shown himself one of the first to extol his own properties, without in any manner attempting to depreciate his neighbour's. I am a practical miner, and Mr. Barnard is my best friend; and I say, unhesitatingly, that I hope from my very heart, and believe from my very concience, that in the Virtuous Lady, the Queen, and the King he will eventually have three of the best mines in England.

Great Royalton.—During the week King's lode has been cut from the winze, and although already 12 ft. in., carrying the lode all the way, the men have not cut through it yet. This is said to be one of the largest tin lodes ever seen in the county. It gives in value about 100 lbs. of tin in weight to the ton of lode-stuff; and sufficient ground has been laid open to last for years to come. This is a surface working almost, being only 10 fms. from surface, and, consequently, the expense of working is greatly reduced. Notwithstanding there has been some delay, everything has arrived at last to working trim; and now the shareholders may look forward to dividends, as there is sufficient machinery and plenty of tin.

Gorsedd and Celyn Level.—It is most satisfactory to announce that the re-opening of the two shafts to unwater the Celyn Level part of this company's sett has been successfully carried out, at a less cost and within the time estimated, effecting the entire drainage of this great district. Operations can now be extended upon the lodes that have proved so rich and productive.

Silver Mining in Arizona.—A letter from Wickenburg (July 22) says—The Vulture Mine is 15 miles from the village of Wickenburg. The mine has been opened to a vertical depth of 250 feet, at which point the vein is 30 feet in width. The richest ore at the present writing is taken from the upper shaft, but no experienced miner can for a moment doubt the richness and extent of the mine after a careful examination of its developed ground. The mine has not been opened to show to advantage, as most of the Washoe mines were, but more reference appears to have been had to speedy returns than anything else. A Scotchman, Mr. Taylor, is superintendent at the mine, and an excellent superintendent he is. Being satisfied of a permanent position, he has recently brought out his family from the old country. There being no water at or near the mine, the ore has to be hauled 15 miles, to Vulture City, in order to be crushed. Vulture City is only 1 mile from Wickenburg, and is named from the Vulture Company's mill and works. The mill is a 40-stamp mill, with power for 60 stamps, and is one of the finest on the Pacific coast. The average crushing is 80 tons per day, and I doubt if there is another of its size in the world that turns out more bullion. The hauling of the ore from the mine to the mill costs the company $7 per ton; it formerly cost $9 per ton. An escort of United States troops is necessary to protect the freight train from the Apaches, who swarm around Wickenburg and are very dangerous, to freighters especially, as they are very fond of mule meat. A traction engine and cars are now on their way here from Scotland—an experiment of the superintendent, who saw them work successfully in that country, and who is satisfied that they will reduce the expense of hauling the ore to $2 per ton. Should this prove the case, in another year the Vulture property will be one of the most valuable on this coast. You will ask, "What does the ore pay?" Of that we cannot speak to a certainty; but we may say that for several years it yielded $71½ per ton, clear of all expenses. At the time of the erection of the mill the mine was mortgaged to obtain it, but the debt was paid within six weeks from the commencement of its crushing. The general superintendent of the Vulture Company is Mr. B. Sexton, who came out from Connecticut last year for that purpose. Mr. Sexton was at one time a superintendent of a large factory at Connecticut, and he has introduced the most surprising system in all the company's transactions, thus demonstrating the great success of mining when conducted in a shrewd and systematic manner. The superintendent exercises a fatherly care over his employees, providing for all their wants with admirable foresight. There is a large garden, in which most of the vegetables necessary for the mill and mine are raised. The company's boarding-house compares favourably with any hotel in the Territory. Should a miner be taken sick he is charged for his board, but only about the actual cost of the provisions consumed by one man—$1 per day. The usual cost of meals in this Territory is from 75 cents to $1, and dreadful poor at that.

Snowdon Slate Quarries, Newfoundland.—The Editor of the *Public Ledger*, Newfoundland, of July 26, writes as follows:—"We were shown on Saturday last some very fine specimens of slates taken from the Snowdon Slate Quarries, Smith Sound, Trinity Bay. The slates are said to be the finest in the world. The extent of bed is 30 miles, running north-east to Keels, Bonavista Bay. At present there are only three men at work—the owners, Messrs. P. and D. Currie, Welsh miners, and one hired man—who turn out 70,000 slates per annum. The owners say that there is slate enough to give constant employment to 2000 men, allowing, at the same time, plenty of room to work, while the quality of the slate (in all colours) is fully equal to the best Welsh. The slate cliff is 30 fms. on the seaboard, rising in terraces as it recedes from the water, and the depth of water close to the slate-yard is 7 fms., with anchorage safe to ride vessels of the largest tonnage. We learn that one great expense is here obviated—that of conveying the slates from the quarry to the yard for shipment. In Wales the quarries are from 5 to 10 miles inland, and the slates after being dressed have to be sent out to the place of shipment at a great expense. At the Snowdon Quarries the vessel may run close up to the yard adjoining free of all expense but the labour of stowing the cargo away in the vessel."

The New Zealand Company's Works.—Having at last got a fine day last week, we determined to inspect the progress of the company's works on the Driving Creek, a place still rather difficult to reach, as the road, in spite of the fine weather, was knee-deep in mud. We were much pleased to see that a great deal of work had been done. The first thing we came upon was an excellent and substantial bridge across the creek, to give access to the site, and to enable the machinery to be carted to its destination. This is a good example to our tardy Government to do the same over the other creeks. From the bridge we came upon a good firm roadway, about 16 feet wide, excavated out of the hill behind. This, the manager informed us, arose from the Government compelling the company to alter their plans, just as the foundations were being laid, and pushing the works back into the hill, to allow more space for the long-talked of public road being made. The 16-feet road passes the back of the mill-house, the walls of which are fast rising, and if we may judge by the massive timbers bedded down on the solid rock, and the workman-like way in which the whole appears to be progressing, we shall have one of the firmest and finest batteries yet erected at Coromandel. The smoke-stack is almost three parts up, and does credit to the builder. The boiler, we are sorry to find, is not yet on the ground, the state of the roads having been so bad that great delay has taken place in carting it up. As no further delay can be permitted, it will be removed on Monday to its destination. The boiler is constructed on a new principle, which has not yet been tried in the colony, and we must defer any remarks on it until we actually see it at work. Great activity prevails on the works, and from the number of men on the ground, the contractor seems determined to have everything finished within the contract time. We shall have to pay another visit to the spot in a few weeks time before we shall be able to speak of the machinery, which we regret to hear will consist at present of 12 head of stampers only (although the company have 32 in store). We are inclined to think this a mistake, as from the excellent position of the machine site, with good payable mines on three sides at the confluence of two creeks, up one of which it is contemplated to run a tramroad, and the junction of three roads, we do not think a more eligible position for machinery could be found in the district. Nor can we think that as the summer advances there can be a doubt but the number of stampers will have to be increased. From the energy and activity displayed by the manager, and the interest he appears to take in doing all he can for the company he represents, we think that the company, as well as the miners of Coro-

mandel, will have reason to be pleased and satisfied with his exertions. We have been informed that much dissatisfaction has been caused by the contract not being given to the lowest tenderer; but be this as it may, the present contractor, so far as we can judge by what we saw, is evidently doing his work well and substantially.—*The Argus*, Coromandel, July 30.

FOREIGN MINES.

FRONTINO AND BOLIVIA (Gold).—The directors have received their usual advices from Mr. Rouch, dated Aug. 12, accompanied by a remittance of 456 ozs. of gold dust, the produce for July. The following is the account of the cost and produce for June:—At Frontino and Bolivia Mines, and expenses in London and Medellin, 1766*l.* 5*s.* 10d.; depreciation of plant at 10 per cent. per annum, 65*l.*=1831*l.* 5*s.* 10d.—Produce: 456 ozs. of gold dust from 1880 tons of mineral stamped, average yield per ton ¼ oz. The Frontino mill was at work from July 2 to 19 only, owing to the causes mentioned in the last monthly circular, 1134*l.* 17*s.* 1d.: loss, 696*l.* 8*s.* 9d. No report of the working of the Bolivia Mines has been forwarded, owing to the death of Mr. Grieff, the company's superintendent there. The mines are now in charge of Mr. Oscar Grieff. Mr. Rouch, in his letter, states—"The Silencio Mine has improved, and will do more yet. The San Joaquin Mine is still a good deal covered up with rubbish." He adds—"We have now mills that will have water through the summer, when all the mining operations will be more easy.

The following is the report from the agent of the Frontino Mine:—July 26: Produce for the past month 855 castellanos, which I forward in the usual manner to Messrs. Marcelino, Restrepo, and Sons. We have seven stopes working in the main level, the lode in which will average 20 in. wide, producing fair-quality mineral.

BATTLE MOUNTAIN (Nevada).—W. Nancarrow: Virgin Lode: In the 73 ft. level, north of Virgin shaft, the lode is very much improved since my last report; it is 3 ft. wide, and 2 ft. from the bottom of the end is a real good lode, with a branch of ore about 12 in. wide running to near the top or back of the level. The hanging-wall on the western side is the best wall I have yet seen on this lode. I think the indications are to-day that this lode will soon be as good as ever. The stopes in the back of this level are still looking well, and turning out large quantities of ore. There is no change to notice in the 73 ft. level, south of the Virgin shaft.—Lake Superior: Nothing new since last report.—Hallow's Ledge: In sinking the shaft the lode is still large, 4 ft. wide, and producing good stones of rich copper ore. We are still sending down all the ore we can—that is, by all the teams we can get. I sent by railway to San Francisco 1000 sacks, and shall have by to-morrow 700 more at the railway station, besides from 1000 to 1200 sacks on the mine and in the ore-house, and we are still taking out of the mine a good quantity daily.

SWEETLAND CREEK.—The following telegram was received to-day from Mr. G. D. M'Lean, manager of the Sweetland Creek Gold Mines, California: We have cleaned up after a run of 53 days. The gross returns are $15,750, or 3150*l.*; the profits are $8500, or 1700*l.*; the remittance is $8000, or 1600*l.*

— Sept. 3: Mr. M'Lean, the agent, says that there is no change of interest; he expected to clear up about the middle of the month, and hoped to obtain a good yield. The mine was looking just as well as ever, but the question of a new tunnel was pressing for early settlement. The maps would be sent on with as little delay as possible.

PACIFIC.—Lander Hill, Sept. 2: The ground in the 550 south is much the same. In the 550 north-west the ground is favourable for driving. In the 400 ft. level, west of engine-shaft, we have cut a branch in the end, and are now through it, the lode presenting a better appearance to-day than for the last 150 ft.; it is 18 in. wide, producing some fine stones of black sulphurets, and there is a flookan on the lode which I have not seen anything like since we had the ore under the first break. I think this lode will further improve going west as it leaves the disordered ground. The stope in back of the 400 ft. level is producing some good ore. We are now opening east and west over the break to lengthen the stope, and communicate with the rise in back of the level, and west of break, where the lode is producing good stones of ore. Our stoping ground here is hard, and will take a long time to open up. I think from the appearance of the lode that it will improve as we open over the break towards the surface. We have something like 700 ft. of ground on the lode to surface.

PORT PHILLIP AND COLONIAL (Gold).—The directors have advices from their resident director, *via* San Francisco, to July 25, being nine days later than previous advices, whereby it appears that during the fourth week in July the quantity of quartz crushed was 971 tons, making 4137 tons crushed during the month. The yield was 319 ozs. 5 dwts. of gold, or an average of 6 dwts. 14 grs. per ton, making the average yield of the four weeks 4 dwts. 14 grs. per ton.

LUSITANIAN.—Sept. 13: Palhal: In the 140, east of Taylor's, the lode is 1½ ft. wide, composed of flookan. In the 140, west of Taylor's, the lode is 10 ft. wide, containing a branch of ore worth ¾ ton per fathom. In the 130 west the lode is 6 ft. wide, composed of quartz and ore, worth ¾ ton per fm. In the 110, east of River shaft, the lode is 2 to 3 ft. wide, composed of quartz and ore, worth 1¼ ton per fathom. In the 90, east of River shaft, the lode is worth 4 tons of ore per fathom. In the 70 east the end is suspended. The lode in winze No. 82 is worth 1 ton per fathom. In the 70, west of slide lode, the lode is 6 in. wide, composed of quartz and small stones of ore. In the winze No. 83, below the 70, the lode is 1 ft. wide, composed of quartz and good stones of ore. In the adit level west of Perez' shaft the lode is composed of soft silica and country. In the adit, east of where cut into, and west of Perez' shaft, the lode is 1 ft. wide, worth ½ ton of ore per fathom. In the 8 fm. level, west of cross-cut, west of Perez' shaft, the lode is very much disordered. In the 18, west of cross-cut, west of Perez' shaft, the lode is 1¼ ft. wide, composed of quartz and ore, worth ½ ton per fathom. In the 28, west of slide lode, on Mill lode, the lode is 9 in. wide, worth ½ ton per fathom. In the 38, east of Taylor's, the lode is worth 1 ton per fathom.—Carvalhal: In the 60 fathom level cross cut, south of incline shaft, the ground is rather hard. In the 60 fm. level cross-cut, north of incline shaft, the ground is composed of gneiss, and is rather hard. At the winze No. 11, below the 20, west of incline shaft, on canuter lode, the lode is 1 ft. wide, worth ½ ton of lead per fathom. At the 50 on the great lode, the lode is 1 ft. wide, worth 1 ton of blende, spotted with lead. At the 50, west of incline shaft, the lode is rather disturbed, and at present unproductive. At the 40 east the lode is 2 ft. wide, worth ½ ton of lead per fathom. At the 30 east the lode is composed of the country, and at times faces of lead. At the 20 east the lode is 1½ ft. wide, composed of quartz, country, and spots of lead. At the adit level, west of incline, on the caunter lode, the lode is 1 ft. wide, containing stones of blende.

CAPULA.—Capt. Paull, Aug. 24: There is no alteration to note in San Pablo cross-cut since my last. The men drove 70 centavos of a vara in the last fortnight, making 1 vara in four weeks. Mr. Sewell thinks we have not yet met with the main part of the lode, only branches; but, according to the underlie of the lode for 100 varas above adit, we ought to intersect the lode in 13 varas in the cross-cut. Certainly, the underlie of lodes varies considerably; and should the lode be a little more downright it will make a difference in the distance of the cross-cut; last Saturday we were in 13 varas 70 centavos. Nothing has been done in the winzes below the Esperanza level since my last, on account of the water. The men worked one week in San Enrique winze, and struck for higher price. We have offered them $35 per vara; others would gladly take it at that price, but are afraid. There is very little water in the winze. The lode is very promising, and I consider will be productive in a few more varas in depth; it is composed of calcareous spar, with blue ore of a good class. We are working one stope east and two west of San Jorge rise, and one also west of La Bomba; the metal, especially from the latter, is of very fair quality, from 15 to 17 marcs per monton, which we are mixing with a lower ley to send to Jesus hacienda. There are now in the hacienda 272 cargas 5 arrobas of metal, and about 35 cargas in the ore-yard, which we shall send away this week, without the rain prevents the fleteros from coming. Last week we only had one mason working about the leat in San Juan hacienda, the others having left for Real del Monte, where they are building a new engine-house, and employing all the masons they can get; but I suppose that after the rainy season is over we shall be able to get sufficient hands to finish the work in a short time. We have six barreteros blasting rock on the north side of the wheel-pit for masons, and opening space for tanks, &c. All the peons we can get are employed filling and levelling the ground inside the walls. The framework for carrying the launders over the wheel-pit, and the timber for roofing, is all fixed; we are waiting for the shingle to cover it. The Mexican carpenter we have says he can put the wheel together in three weeks. We consider it better to complete the leat first, and have the water ready to turn on the wheel when finished. Since my last I have been to Real del Monte and seen the engineer, who has promised to get the crown-wheel cast as soon as possible, and the spur-wheel fitted on to the gudgeon of the stamps-axle. If we can get it all complete by the middle of October, it will be as soon as we can expect the roads to be in a state to bring them out.

[For remainder of Foreign Mines, see to-day's Supplement.]

WATT'S FIRST ENGINE.—A correspondent informs us that in the once extremely pretty and still not ugly vale of Fairbottom, though invaded by coal pits, at Bardsley, near Ashton-under-Lyne, there is a quaint old coal pit engine mantled with ivy, and forming a most picturesque object. About ten years ago Messrs. Jackson Brothers, the enterprising photographers of Oldham, took three views of this rude mechanical relic, which, in accordance with popular tradition, they labelled as views of "Watt's First Engine."—*Athenæum.*

CHALLENGE TO THE WORLD.—The *Bristol Daily Times and Mirror* Aug. 15th, has the following: Messrs. J. C. Swan and Co., of 16, Queen-square, in this city, have invented a pocket microscope, which is a marvel in all that such an instrument should be. It has great power, remarkable definition, and does not require focussing. The cheapness of the article will make it exceedingly popular when its merits are more widely known. It is called the "Bristol Microscope," and is a great credit to the inventor, as much for its extreme simplicity as its power.—The *Western Daily Press* says: The Bristol Microscope has a magnifying power of 26,000 times, &c.—The *Western Daily Telegraph* says: The Bristol Microscope is the most compact and useful scientific instrument we have ever seen; it possesses extraordinary power, and is very easily managed, &c. The price of the Bristol Microscope is only 2*s.*, or free by post, with printed directions, for 28 stamps.—Address, J. C. Swan and Co., Opticians, 16, Queen-square, Bristol.

HOLLOWAY'S PILLS AND OINTMENT—HOME ENJOYMENTS.—These can never be obtained till health dwells within the house, whatever the person's station or circumstances may be. Holloway's remedies by their purifying and healing powers, secure bodily soundness in the most simple and natural way, by expelling all impurities, relieving all hurtful accumulations, and inducing perfect regularity of action. Invalids should give these innocent and effective medicaments a fair trial before they permit themselves to fall into a state of chronic ill health. Still more should they seek succors from Holloway's regenerating treatment, before they yield themselves up to despair and sink under their sufferings. Both pills and ointment may be used with safety, under guidance of their accompanying directions.

FALCON CLIFF.—In our last number we published the engineer's and directors' reports of this mine, and now wish to draw especial attention to the statements they contain. They are couched in language which admits of but one construction, and free as much as possible from puzzling technicalities. The circumstances are most singular, and exhibit an amount of perseverance in overcoming official difficulties (which would have frightened most people) creditable to those who conducted the negociations on behalf of the company. And the results, it is considered, must be more than usually gratifying to all concerned. After carefully considering the features of the setts so graphically described, and the very unusual success (a course of ore 10 inches thick at 40 feet from surface, and not less than 150 fathoms of ore ground proved) which has so soon followed the commencement of operations, the public can have little difficulty in arriving at the conclusion that in such hands as form the directorate and management this property is likely to become one of the best in the mining world. We heartily wish it all prosperity, and shall be glad to record its continued success.

EAST LOVELL.—The report of the manager, which appears in another column, shows that this mine is opening up most satisfactorily. It seems necessary to remind *bona fide* shareholders that at least some of the so-called inspectors, who pay fortnightly visits, have ends to serve other than the advancement of the company's welfare. It is to be feared that there are inspectors who speculate largely in the shares, and accordingly allow their judgment, as expressed in their reports, to be very materially warped. Surely shareholders have the most substantial reason to place implicit reliance in the weekly reports of their cautious and experienced manager, and, therefore, should utterly disregard the reports of interested speculators. One of the most tangible proofs of the producing capabilities of the mine is that, in face of the absence of an adequate supply of water, 4 tons of tin are being returned weekly, while the manager states that "the mine is in a position to return 1 ton per day, provided there was sufficient water for dressing purposes." It is fully expected that the usual dividend of 2*l.* per share will be declared at the meeting, to be held during the present month.

PERRAN WHEAL VYVYAN.—Upon previous occasions attention has been directed to the spirited manner in which this mine has been worked by the present company, consisting of a few private gentlemen, and it is satisfactory to find that their efforts are being attended with success. Upon one of the lodes, supposed to be the same as that worked in West Chiverton, such a discovery has been made as to warrant the erection of machinery forthwith to open up what appears to every practical man to be the commencement of a rich and lasting mine. Specimens of ore discovered can be seen at the London office. It is intended at an early date to introduce the mine as a limited liability company, for the purpose of raising additional capital, so that extended operations may be carried on upon the several lodes traversing the sett. In the re-formed undertaking each of the present proprietors will retain his interest, accepting the whole of their outlay, in paid-up shares, being satisfied as to the ultimate value of the property. A considerable expenditure has been made in bringing the mine to its present condition.

ARGENTIFEROUS LEADS.—The invention of Mr. G. DUMONT, Liege, is an apparatus in which the circular arrangement is adopted. In this circular arrangement the apparatus is composed of a beam free to turn on a vertical axis in the centre of a platform. The beam is supported on rollers which run on a circular rail. It carries at one end a vertical cylinder, which can receive steam alternately at top and at bottom, and the height of which is regulated by the depth of the heating vessel, so that the tool can reach their bottom and rise a few inches above their edge. This cylinder effects all the vertical movements. Inside the cylinder is a piston, the rod of which is hollow and gives passage to a central rod, which carries the tool. The tool-rod has an enlargement bearing on the piston, so that when the latter rises the tool is lifted. This rod is prolonged through the top of the cylinder, and carries a bevel wheel, which is feathered thereon, so that all rotary movement given to the wheel is imparted to the rod, and consequently to the tool, at whatever height the tool may be. The rotary movement of the rod is obtained by means of a pair of small steam cylinders at the side of the beam. The cylinders are provided with slides which allow of interverting the movement.

ARTIFICIAL FUEL.—Messrs. J. BANNEHR and H. MATTHEWS, of Gower-street, prepare artificial fuel by mixing "breeze" obtained from gas works or other places with various proportions of small bituminous coal or pitch and with a mucilage of cement, prepared from seaweed by preference, but mucilage or cement prepared from other vegetable or animal substances may be employed.

OXYGEN GAS.—The invention of Mr. P. BROCCHI, Paris, consists in effecting the solution of oxygen gas contained in the atmosphere, in water, alcohol, or other liquids, which possess a greater solvent power for oxygen than for nitrogen, that being the other principal constituent. As the solubility of gases is dependent upon the pressure under which the solution is effected, it is preferred to operate at high pressures, which are easily obtained by means of air and force pumps.

HAND SIGNAL LAMPS.—By the invention of Messrs. S. W. CLARK and W. R. SYKES, Clapham, the coloured shades (say, red and green) are held in frames, each of which has a lug or projection, by which the shade is hung from a horizontal bar in the lamp; the two shades are so disposed that when they are both raised they overlap each other. To the lamp the inventors connect a rod or wire, the upper part of which is bent over the top of the lamp, so as to be within reach of the fingers of the hand, which holds the lamp by the ordinary top handles.

WATSON BROTHERS' MINING CIRCULAR,

The great extension of mining business, the difficulty so often complained of by country shareholders in getting accurate and disinterested information as to the state of Cornish and foreign mines, and of the financial and real position of mining companies generally, have induced Messrs. WATSON BROTHERS to make their Circular published in the *Mining Journal* more extensively known, and to state—

That they issue daily to clients and others who apply for it a price-list (as supplied, also, to most of the London daily papers), giving the closing prices of mining shares up to 4 o'clock.

They also buy and sell shares for immediate cash or for the usual fortnightly settlement in all mines dealt in on the Mining and Stock Exchanges, at the close market prices of the day, free of all charges for commission. They deal, also, on the same terms, in the public funds, railways, telegraphs, and all other securities dealt in upon the Stock Exchange.

Having agents in all the mining districts, they are constantly getting mines inspected for their own guidance, and will also obtain special reports of any particular mine for their clients, for the inspecting agent's fee of £2 2*s.*

On the arrival of the West India, Australian, and other mails special information will be forwarded to their clients interested in foreign mines, particularly Australian United, Chontales, Pacific, &c., &c.

WATSON BROTHERS,

MINING AGENTS, STOCK AND SHARE DEALERS, &c.

1, ST. MICHAEL'S ALLEY, CORNHILL, LONDON.

SATURDAY.—With the exception of an advance in East Lovell, there is very little alteration in yesterday's prices. East Lovell, 31 to 32; West Chiverton, 53 to 54; Drake Walls, 24*s.* to 26*s.*; Great Laxey, 17¼ to 17¾; Parys Mountain, 3½ to 4½; Providence, 38 to 39; West Frances, 27½ to 30; Seton, 45 to 47½; Taquaril, 34*s.* to 36*s.*; Frontino, 12*s.* 6*d.* to 15*s.*; Don Pedro, 3 to 3¼.

MONDAY.—Market very dull to-day. East Lovell, West Chiverton, and South Frances chiefly dealt in. East Lovell, 31½ to 32½; West Chiverton, 53 to 54; South Frances, 28 to 30; Chiverton Valley, 2½ to 3; Great Retallack, 20*s.* to 25*s.*; Van Consols, 2 to 2¼; Tankerville, 14¾ to 15¼; Grenville, 25*s.* to 30*s.*; East Grenville, 2⅜ to 2⅝; Great Vor, 5½ to 6; Taquaril, 35*s.* to 37*s.* 6*d.*

TUESDAY.—Market continues very inactive. East Lovell shares flat at 31, sellers. Great Laxey and West Chiverton shares firm at quotations. East Lovell, 30 to 31; West Chiverton, 53 to 54; Great Laxey, 17½ to 18; West Frances, 28 to 30; South Frances, 28 to 30; Taquaril, 35*s.* to 37*s.* 6*d.*; Marke Valley, 6⅞ to 7⅛; Great Retallack, 20*s.* to 25*s.*; Chiverton Valley, 2½ to 2¾; Mary Ann, 8½ to 9; Providence, 38 to 39; Tankerville, 14¾ to 15¼; Van Consols, 2 to 2¼.

WEDNESDAY.—Market very quiet, and prices merely nominal. West Chiverton, 53 to 54; Great Laxey, 17½ to 18; East Lovell, 30½ to 31½; Cook's Kitchen, 17 to 18; Great Vor, 5½ to 6; Seton, 40 to 45; Parys Mountain, 3½ to 4½; Taquaril, 35*s.* to 37*s.* 6*d.*; Australian United, 1 to 1¼; and Frontino, 12*s.* 6*d.* to 15*s.*

THURSDAY.—Market inactive. Taquaril firm and in demand. Tankerville, Pacific, Seton, and Prince of Wales flat. Taquaril, 36*s.* to 38*s.*; Tankerville, 14 to 14½; Pacific, 2¼ to 2¾; Seton, 37½ to 42½; Prince of Wales, 10*s.* to 12*s.* 6*d.*; Chiverton Moor, 3½ to 4; Drake Walls, 20*s.* to 26*s.*; East Lovell, 30½ to 31½; West Chiverton, 53 to 54; Don Pedro, 3½ to 3¼; Van Consols, 2 to 2⅛; Great Laxey, 17½ to 18.

FRIDAY.—Settling-day; market quiet. East Lovell advanced to 31½, buyers. East Lovell, 31 to 32; Great Laxey, 17½ to 18; Providence, 37 to 38; Seton, 37½ to 42½; West Chiverton, 53 to 54; South Frances, 28 to 30; West Frances, 28 to 30; Grenville, 25*s.* to 30*s.*; East Grenville, 2¼ to 2½; Taquaril, 36*s.* to 38*s.*; Don Pedro, 3 to 3¼.

The Nawab Nazim of Bengal, with Prince Ali Kudr and Prince Suleiman Kudr, accompanied by Mr. Harland-Burke, M.P., Colonel Lay, Mr. W. D. Fox, and a large suite, are staying at the Great Western Hotel, Birmingham, where apartments had been engaged for them.

Mining Correspondence.

BRITISH MINES.

ABERDAUNANT.—H. Francis, Sept. 26: The mine in No. 2 adit in taking down the side of old stopes, looks well to-day, and we have the lode as good as ever in the side of deep adit level. The ventilation being perfect we can carry on any operations here. Though we are still dressing the ore, the want of water caused by the drought operates for the time being against you.

BALLACORKISH.—Capt. Trewren, Sept. 24: In the end driving east in the adit level, to intersect King's lode, the ground is of a favourable character for mineral, with a little water coming from the forebreast. The end driving north in the same level is letting out a large quantity of water. In the end driving east in the 12 fm. level, on the Dowk vein, we have a channel of mineralised ground, producing some stones of blende, spotted with lead ore. In the cross-cut driving west to intersect the lode, in the 36 fm. level, the ground is of much the same character as for some time past, rather hard and slow of progress. The tributers are working energetically, and are breaking some good work for lead ore and blende.

BEDFORD UNITED.—James Phillips, Sept. 29: The shaft is sinking by the side of the lode, and we are driving by the side of the lode east and west, at the 103. The lode in the 90 west is still 4½ feet wide, and continues to yield full 8 tons of ore per fathom. Driving by the side of the lode is continued in the 90 and 75 fm. levels east. The different stopes throughout the mine are yielding their usual quantity of ore.

BLAEN CALEN.—J. Evans, Sept. 28: There is no change worthy of notice in any part of the mine. I expect that the north cross-cut from the 25 will reach the lode in three or four fathoms more driving, and there is once more a change of ground, which leads me to expect that the men in the straight adit will cut the lode now soon. I believe that the cross-cut south in the 10, is in far enough, so I shall at once turn and drive east on the course of the lode to get under the dip of the ore east of adit. We are obliged specially to refit, with heavy and wide wheels, a timber carriage, to get up the boiler of engine, and thus some delay will necessarily take place. The vessel has discharged her cargo, and most of the less heavy castings are got up to the mine.

BRONFLOYD.—T. Kemp, Sept. 28: The different bargains throughout the mine are without any change to notice.

BRYN ROYALTON.—T. Parkyn, Sept. 29: We have opened on rich work for tin close up to the surface, and of this you have immense quantities, as I have sunk pits or shafts actually through three fields over 300 fathoms in length, so that the quantity here rich for tin is inexhaustible. I am pushing on the driving of the adit on the lode with all possible dispatch, as this adit will come in at least 20 fathoms from surface, so the tinstuff will have only to be trammed into the stamps. No cost in pumping water, there being ample for all dressing purposes; and looking at the facilities and the richness of the tinstuff, with the quantities laid open, I am very pleased to inform you that you have a most valuable property, and the profits will be lasting and large.

BUDNICK CONSOLS.—John Rawlings, Richard Hill, Sept. 29: The tribute pitches are yielding their usual quantity of tin. We have not any tutwork bargains in the mine. The parcel of tin sampled on Saturday last, the 24th inst., realised 73*l.* 2*s.* 6*d.* per ton. We are sampling regularly every month more tin than many mines are with a draught engine working. This must certainly show for itself that the proprietors have a good and lasting mine before them.

BWADRAIN CONSOLS.—R. Northey, Sept. 26: The lode in the deep adit level at Dolfawr, is improving in size, and no particular change in its appearance since the last report. The lode in the 55 west is 3 feet wide, composed of killas, with strings of quartz throughout. The 55 east is as last reported; good progress is being made in these ends. In the 45 west the stratum is getting more compact and congenial for lead ores. The new stope in the back of the 45 is worth about 1 ton of lead per fathom; the other stopes are producing their usual quantities of ore. We shall sample this day 30 tons, and are going on regularly with our dressing.

BWLCH CONSOLS.—R. Northey, Sept. 26: The lode in the 70 is 2 feet wide, producing saving work. The lode in the 60 is 3 feet wide, worth 15 cwts. per fathom. We are still cutting through branches in the 40 cross-cut, which is composed of quartz and lead ore; I think we are nearing the lode. The lode in the 30 is 2 feet wide, carrying a mixture of lead ore, but not in sufficient quantities to value. The eastern stope in the back of the 50 is not looking quite as well as last reported, all the other stopes are without any material change. We shall sample to-day 50 tons of lead ore.

CALDBECK FELLS.—P. Hawke, R. Trevarthen, T. Lamb, Sept. 23: We continue to make good progress in the cross-cut south from Lainton's engine-shaft to Dobson's and the Silvergill lodes, likewise south in this level to the north of great south lodes. We have nearly completed the balance beam-box and all its appliances, and hope to connect this additional machinery to the engine in about a week from this date. The 20 west, at junction shaft, on north lode, has been poor for several feet, but there is now a decided change for the better. The end east in the 20, on said lode, is worth for lead 12 cwts. per fathom. We have a piece of the caunter lode in the end south-east in this level, for 9 feet long, desued, and expect to strip it down about the middle of next week, when we shall be able to report its value. The north lode in the 10 west, at Junction shaft, is composed chiefly of quartz with lead intermixed, but not to value. The 10 east, on caunter lode at this level, is at present poor. We have met with in the cross-cut near the Junction shaft in the deep adit, and north from the north lode towards the caunter beyond the Junction shaft, a strong feeder of water, which indicates a hollow porous lode not far apart from the point in operation. The north lode, west in the deep adit, is worth for lead 30 cwts. per fathom. The end east in the deep adit, on the newly-discovered lode, is worth for lead, blende, and copper, 35 cwts. per fathom. The 80 west, on north lode, is worth for lead 5 cwts. per fathom. We sampled on the 15th (computed) 51 tons of lead of good quality, and 11 tons of copper ore; total 62 tons. We calculate to sample monthly over twice this quantity of ore immediately we have sufficient water to enable us to dress to that extent.

CAPE CORNWALL.—R. Pryor, J. Davey, Sept. 17: The ground in the 100 and 70 fm. level cross-cuts is without change to notice. Saturday being our pay and setting, a full report shall be sent you.

CEFN BRWYNO.—J. Paull, Sept. 27: At the 92, west of engine-shaft, the lode is 4 ft. wide, improving, now being worth 1 ton of lead ore per fathom. In the stope over this level, 60 fms. east of shaft, the lode is 3 ft. wide, and will produce 14 cwts. of lead ore per fathom. The lode in the 80, west of engine-shaft, is large, and the part being driven upon yields good saving work. The lode in the winze sinking below this level (50 fms. west of shaft, and in advance of the 92) is 4 ft. wide, containing good branches of ore, and will produce 18 cwts. of lead ore per fathom. In the stopes over this level, west of winze, below the 68, the lode varies from 5 to 8 ft. wide, yielding on an average 14 cwts. of lead ore per fathom. The lode in the stope over the 56, east of shaft, is 4 ft. wide, interspersed throughout with lead ore, worth 1 ton 5 cwts. per fathom. We have now a good supply of water, and all work is being pushed on with the utmost vigour, and we hope to sample our usual quantity of lead ore about the end of next week.

CHIVERTON MOOR.—G. E. Tremayne, Wm. Bennetts, Sept. 27: In the 95 fm. level cross-cut south we have intersected the south or main part of the lode, but have not yet cut through it; as far as we can see, it is 12 in. wide, composed of flookan, quartz, mundic, and lead, and letting out a large stream of water. The lode in the 85 west continues to be worth about 2 tons of lead per fathom. The stopes throughout the mine are looking quite as well as when last reported on. We are getting on very well with the dressing for the next sampling.

— (*Telegram*) Wm. Bennetts, Sept. 28: Good improvement in the 95 since report. We have broken some good saving work for lead to night.

CRENVER AND WHEAL ABRAHAM UNITED.—W. Kitto, W. Thomas, W. J. Paull, Sept. 27: Setting Report: Sturt's Engine-Shaft: The sumpmen will begin to-morrow to send down the plunger bottom to fix at the 190, which will take a week to complete.—Pelly's Engine-Shaft: The sumpmen have taken a contract to fix the lift in the cistern at the 190, put down two pieces of main rods, and cut the ground that will be required for the same, to complete the whole for 16*l.* The 95 fm. level end, to drive west of Willyam's engine-shaft, on the north lode, by three men and three boys, the month, at 4*l.* per fathom; the lode is 1 ft. wide, composed principally of mundic. A rise in the back of the 70, west of Gard's shaft, on the old lode, by two men and two boys, at 2*l.* 10*s.* per fm.; the lode is 2 ft. wide, producing soft spar, flookan, and spots of copper ore, having a kindly appearance. In the 110 cross-cut, north from Pelly's engine-shaft, the ground is hard and spare for driving; price 11*l.* per fathom—was not set. The 120 cross-cut, to drive south from Woolf's shaft, by six men, the month, at 7*l.* per fathom; the ground is more favourable for driving. The 160 fm. level end, to drive east from Woolf's shaft, on the old lode, by four men, the month, at 4*l.* 10*s.* per fathom; the lode is 2 ft. wide, with stones of copper ore, but not enough to value. The 90 fm. level end, to drive east of Woolf's shaft, on the old lode, by two men, the month, at 9*l.* per fathom; the lode is 3 ft. wide, producing a little copper ore to dress. The 130 fm. level end, to drive east of Crenver shaft, on the old lode, by four men, at 5*l.* per fathom; the lode is 3 ft. wide, looking promising to improve. A bal bob-plat to cut at Pelly's engine-shaft, at the 120, by six men, the month, at 4*l.* 4*s.* per cubic fathom.—St. George's Shaft: To clear, secure, and bed-plank from the 180 to the 190, by four men, at 1*l.* 7*s.* 6*d.* per fathom.—Vivian's Shaft: A skip-road to be put down from the 180 to the 190 by three men, at 6*l.* per fathom.—Blewit's Shaft: To clear, secure, and put down the skip-road below the 180, or get through the choke, by four men, at 1*l.* 15*s.* per fathom. We shall finish clearing the 180, between Pelly's engine-shaft and Blewit's, this week, to enable us to put a pare of men next week to work on this tin lode. We are pushing the surface operations with all the dispatch possible.

CWM ERFIN.—Sept. 27: Very good progress has been made in draining the water from the old part of the mine since the last report. The 57 fm. level is now dry, and we resumed the driving of the same west of the engine-shaft yesterday morning. The lode in the end is 4 ft. wide, composed principally of quartz, killas, and spots of copper. The winze sinking in the bottom of the 45 fm. level, 25 fms. west of the engine-shaft, will yield from 12 to 15 cwts. of lead ore per fathom. The lode in the 45 fm. level, going west of Taylor's shaft, is 18 in. wide, composed of a dark clay-slate, veins of spar, spots of copper ore, carrying a good footwall, and looks promising. We have ten men stoping over the back of this level, west of the engine-shaft, in which the lode varies from 3 to 7 ft. wide, and will yield on an average 12 cwts. of lead ore per fathom. In the back of the same level, east of the drawing-shaft, we have twelve men stoping; the lode will turn out on an average 15 cwts. of lead ore per fathom. The 32 fm. level going west from the engine-shaft, and the same level going east from Taylor's shaft, were communicated on Friday last, thereby well ventilating that sention of the mines, and throwing some stoping ground at command. The 32 fm. level is now being driven west of Taylor's shaft by four men; the lode here is 20 in. wide, containing killas, carbonate of lime, and spots of lead ore. The lode in the stope over the back of this level, 20 fms. west of the engine-shaft, is 6 ft. wide, and worth from 10 to 12 cwts. of lead ore per fathom. The lode in the 10 fm. level, going west of Taylor's shaft, is ½ yard wide, composed of a nice clay-slate, branches of spar, and spots of lead ore. It will be seen from this report that we are now driving the 57, 45, 32, and the 10 fm. levels back into the western ground, in the whole of which the lode is regular, and looks promising. This ground being parallel with the richest part of the Goginan Mine, I can strongly recommend a vigorous trial being made in this part of the property, and any discovery here would be throwing new life into the mine. We sampled this day 38 tons of silver-lead ore. We have now plenty of water for all purposes, and the weather is everything that can be desired for all surface operations.

DEEP LEVEL.—Sept. 26: The lode in the 116 yard level, north of north shaft, on Pantyffrith vein, is 2 ft. wide, composed of spar, and spotted with lead ore—a promising lode; this level is now extended 128 yards north of north shaft. The cross-cut driving south from the 174, towards the new vein, is in a hard bar of ground at present. The lode in the rise over the 120 yard level, east of cross-cut, on the new vein, is about 2 ft. wide, composed of limestone, spar, and producing good stones of lead ore. We have suspended the driving of the 120, east of cross-cut, for some little time until we ascertain the extent of the old workings going eastward from the rise. The lode in the winze sinking below the 120 is now 6 ft. wide, principally composed of clay, and producing occasional fine lumps of lead ore. We took out a lump on Saturday about 1 cwt. of solid ore: the lode appears to be getting much larger as we go down, There are four tribute pitches working by 14 men, at an average tribute of 7*l.* per ton.

DEVON AND CORNWALL UNITED.—E. James, Sept. 27: The tribute pitch in the back of the 22 fm. level remains the same as when last reported; the lode is now 4 ft. wide, and worth fully 20*l*, per fathom. In the adit end the lode is still yielding some good stones of copper ore. The lode in the 22 fathom level, driving west of engine-shaft, is still small, but looks promising for an early improvement.

DOLWEN.—J. Davis, Sept. 28: The lode in the adit level is very strong and hard, and produces good stones of lead ore; the lode is very wide here, and I think it advisable to turn the adit level now, so as to come under the point of the shaft, which will be a divergence only of 14° east of north from the line of the level. This be more convenient for the future discharge of stuff, as avoiding a sharp angle from the shaft. The ground in the shaft is hard, and the men are progressing slowly. If the men in the level get to the point of shaft before it is through we shall put these on to rise to meet the sinking.

EAST CARN BREA.—J. Rodda, Sept. 29: The 90, west of Buckley's shaft, on No. 6 lode, is producing saving work. In this level east the lode is unproductive. The lode in the 80 west will yield 1 ton of ore per fathom. The winze in the bottom of this level will yield 2 tons of ore per fathom. The lode in the 80 east is looking kindly, and producing 1 ton of ore per fathom; and in the rise the lode is producing saving work, but not to value. The ground in the 60 cross-cut, north of the old engine-shaft, is impregnated with copper, and letting out rather more water.

EAST DARREN.—Sept. 27: In the 116 east the lode is about 5 ft. wide, composed of a clay-slate, carbonate of lime, and a little improved, now yielding 1 ton of lead ore per fathom. In the 104 east the lode has become disordered and hard for exploring, being composed of hard beds of grit and carbonate of lime, producing at times patches of lead ore, but not to value. In the stope over this level the lode is large, yielding 1½ ton of ore per fathom. In the stope over the back of the 92 fm. level the lode is about 1 yard wide, yielding 1½ ton of lead ore per fathom. In the stope below the 68 fm. level the lode is from 4 ft. to 5 ft. wide, yielding 1½ ton of lead ore per fathom. In sinking Skinner's shaft below the 68 fm. level the ground is favourable, and the men are making good progress. All the other bargains throughout the mine are without change to notice since last reported on. The tribute pitches throughout the different levels still continue to yield their usual quantities of ore. Our machinery is in good order, and drawing and dressing in full work, with a pretty good supply of water. We to-day sampled our usual quantity (80 tons) of silver-lead ore.

EAST WHEAL GRENVILLE.—G. R. Odgers, W. Bennetts, Sept. 24: There is no change to notice in any place in this mine since our report for Wednesday. The 75 end and back, with the 55 end and winze, are looking the same as we then stated, and producing the same quantity of copper ore.

— G. R. Odgers, W. Bennetts, Sept. 28: There is no alteration to notice in the 95 east. The lode in the 75 east will produce 2½ tons of copper ore per fm., with a most promising appearance. The lode in the back will produce 5 tons of copper ore per fathom. The lode in the winze sinking below the 55 will produce for the length 7 tons per fathom.

EAST WHEAL SETON.—Joseph Vivian and Son, Henry Arthur, Sept. 29: In flat-rod shaft, sinking under the 34, there is a large kindly lode. We shall commence sinking Basset's engine-shaft under the 34 on Tuesday next. In the 34, west of Cartwright's shaft, the lode is 4 ft. wide, containing a little copper and tin throughout, with a good appearance. The stope in bottom of the 34, west of Cartwright's shaft, produces 2 tons of copper ore per fathom. The tribute pitch in back of the 27, west of Cartwright's shaft, produces 4½ tons of copper ore per fathom. We have set a tribute pitch in back of the 34, east of Cartwright's shaft, at 10*s.* in 1*l.*

EAST WHEAL LOVELL.—R. Quentrall, Sept. 28: Since my last report, as stated we should do, we have followed the tin eastward in a splendid lode, and I hope in my next to have to report an improvement. The south lode above the 70 is 8 ft. wide, and rich for tin. At the western discovery, 200 fms. west, the lode is 2 ft. wide, and continues to hold out great prospects. We are dressing 4 tons of tin per week, but could raise and return much more if we had water.

EXCELSIOR.—G. Rickard, Sept. 28: The men are making good progress with the sinking of the whim-shaft, which is down 10 fathoms from surface, in good killas ground; we expect to meet with the lode in the next 2 fathoms, when the sinking will be continued on its course. We shall proceed forthwith to erect a horse-whim upon this shaft, and when completed it will greatly facilitate the progress, which is of great importance, as we want to effect a communication with the deep adit before the next season sets in. We have no change calling for any remark in the deep adit; the ground is still a beautiful-looking killas, with small branches of friable spar and prian occasionally crossing the end.

FLORENCE AND TONKIN.—Wm. Verran, Sept. 29: The several points in operation are progressing favourably, with every prospect of success, and every effort is being exerted to bring about that success as speedily as possible. The lode in the tribute pitch in the back of the 45 fm. level, east of Saw's shaft, still shows a north underlie, a circumstance of importance to this part of the mine. We have commenced dressing ore for the market, and find it quite up to our expectation.

GAWTON COPPER.—G. Rowe, G. Rowe, jun., Sept. 24: We still continue to cross-cut south at the 95 fm. level, east of King's engine-shaft, which is composed of hard capels, intermixed with mundic, copper ore, and good stones of tin. In the 95 west we are putting up a rise on the north side of the lode, for the purpose of making a communication with the winze sunk 5 fms. below the 82 west. The lode in the 82 fm. level, east of said shaft, is worth 3 tons of copper ore per fathom. The lode in the winze, sinking below this level, is looking exceedingly well, yielding 6 tons of ore per fathom. The lode in the 70 fathom level east is without change. The lode in the winze, sinking below this level, is worth 3 tons of ore per fathom. The lode in No. 1 and 2 stopes, working in the bottom of this level (70), is worth 5 and 6 tons of ore per fathom. We are engaged in preparing for our next sampling, which we calculate will be over 200 tons of copper ore.

GREAT FRON FOWNOG CONSOLS.—William Wasley, Sept. 29: I have nine men driving the new day level, at 5*l.* per yard, which is about 11 yards short of being under the new engine-shaft. I have nine others clearing and repairing the old day level up towards the old engine-shaft, with which we are making good progress. The engineers and men are getting on well with erecting the engines, which, no doubt, we shall have all complete before we get any heavy rain or bad weather to prevent us. The tributers at No. 4 shaft are getting fair quantities of ore.

GOGINAN.—Sept. 28: The lode in the 110, east of winze, is 4 ft. wide, containing a little ore, and ground rather soft. The lode in the two stopes over the 110 fathom level, 25 fathoms east of winze, is 9 to 12 ft. wide, worth on an average 1 ton of lead ore per fathom. The cross-cut north at the 100 fathom level, near the present end, is suspended for the present, there being nothing of moment met with. In a stope over the 100, 5 fms. east of cross-cut, and in another stope over the same level, 5 fms. west of cross-cut, the lode will average 5 ft. wide, and yield 12 cwt. of ore per fathom. The lode in the stope below the 100, 5 fms. west of cross-cut, is 6 ft. wide, worth 15 cwt. of ore per fathom. The stope over the same level, 30 fms. east of rise, is suspended, lode being soft and unproductive. In a stope over ditto, 15 fms. east of ditto, the lode is 6 ft. wide, worth 15 cwt. of ore per fathom. The lode in the stope in the bottom of the 100, 30 fms. east of rise, on south part of lode, is 5 ft. wide, yielding 15 cwt. of lead per fathom. The lode in two pitches over the 60 and 100, respectively 20 and 70 fms. east of Taylor's shaft, will yield on an average 11 cwt. of lead ore per fathom. All surface operations are going on regularly, and we sampled 32 tons of good quality ore to-day.

GORSEDD AND CELYN LEVEL.—Sept. 29: Coetia Eithin Shaft: This shaft, as you are aware, had been re-opened to a depth of 96 yards from surface, where we reached the water, thus leaving 4 yards more to open to reach the 100 yard adit level. Owing to our having cleared the bottom of Coetia Gelynen shaft, the water at Coetia Eithin has disappeared, and I have now set four men to complete the latter shaft to the deep adit. The 80 yard level, driving from the shaft towards Gorsedd part of our sett, is in 17½ yards, and still in a very kindly lode, and favourable ground for driving.—Walking Shaft: We have opened and well timbered this shaft 17 yards from surface; the ground is still favourable for sinking.—Coetia Gelynen Shaft: We have cleared the main trunk of the adit level within 5 yards to the eye of this shaft, which when completed will enable us to turn east and west along the lode.—Waen's Shaft: The lode at this shaft still looks very kindly; when we cut the north and south lode (how soon we cannot tell) great expectations will be realised. All our operations are being pushed forward most vigorously and economically, with good results.

GREAT RETALLACK.—G. R. Odgers, J. Harris, Sept. 29: The lode in the engine-shaft sinking below the 50 is 3 ft. wide, of much the same character as for some time past, with good stones of lead ore, and letting out more water. The lode in the 50 south is 18 in. wide, of white iron and friable quartz, containing good stones of lead. The stope above this level is worth fully 7 cwts. of lead ore per fathom. In the adit crosss-cut, driving towards the blende lode, the men are still in the elvan; they are making as much progress through it as the nature of the rock will permit.

GREAT WEST CHIVERTON.—J. Nancarrow: The ground in the 24 west has recently been hard, and very difficult to drive, but it is now better for progress, and more genial for lead. We expect, therefore, to get on faster towards the lead ground before us, which is dipping fast to the westward, and we think further trials should be made of this below the 24.

— D. R. Stickland, Sept. 28: The 14 fm. level cross-cut south is driven about 4 fathoms. The ground is much easier, and cross-heads coming across the end appear to be near the south part of the lode. The winze under the 14 we have sunk at times when the water has been in at the 24, under the dip of ore ground west, and still produces and shows good lead ground, but we have not done much here this month. The 24 is much easier for driving, and the ground which is first-rate killas, quite genial for producing lead soon.

GWYDYR PARK.—Wm. Smyth, Sept. 27: Gwyn Lliflon, Sutton's Shaft: In the bottom of the 5 west the lode is 13 in. wide, mixed with spar, blende, and lead ore, worth of the latter 15 cwts. per fathom; re-set to four men, at 3*l.* 10*s.* per fathom, stent for the month. In the eastern end of this shaft the lode is about 12 in. wide, also mixed with spar, blende, and lead ore, worth of the latter 12 cwts. per fathom; re-set to four men, at 4*l.* per fathom, stent the month. We are bringing out some good lead ore through Gwyn Lliflon deep adit to the new floors made there. At Johnnie's shaft we are stoping west; this piece of ground at present is not so productive as the shaft was; the lode is small, but yielding good saving work; re-set to six men, at 3*l.* per fathom, stent the month. —Vuchesias Hanging Point: In driving south we have intersected a cross branch, which I expect will lead to the south part of Harker's lode; the branch is about 8 in. big, with some spots of lead ore intermixed; set 6 ft. to two men to drive in that direction for 5*l.* 10*s.* We have a new road from Johnnie's shaft to the crusher nearly completed. The dressing is pushed on with all possible speed, but the water is rather slack for crushing, owing to the dry weather.

HAREWOOD CONSOLS.—T. Neill, Sept. 28: The lode in the engine-shaft is 5 ft. wide, composed of capel, spar, prian, and large rocks of mundic; it is a fine looking lode, and I have no doubt we shall soon sink through the mundic, and get into copper ore. The shaft is now 27 fms. deep.

HARWOOD.—W. Vipond, Sept. 24: We have no change to report in the shaft at the Spa, still sinking in clay with loose tumblers of limestone. The stones of limestone, &c., are strongly brangled with lead ore, apparantly from a strong vein near us.

HAMMETT.—P. Temby, Sept. 29: Setting for October: The adit cross-cut to drive north, by four men, at 4*l.* per fathom; in opening on the new lode east we find it disordered and mixed with blue elvan, which is a great indication of our being near the north elvan, shallow adit; two men to drive and stope the back, at 2*l.* 5*s.* per fathom; the lode is 2½ ft. wide, and worth 8*l.* per fathom.—Royal Lode: Four men to stope down the lode at the side of the level, at 2*l.* 15*s.* per fm.; this part of the lode is 2½ ft. wide, worth 8*l.* per fathom. I have put two men to drive sooth to intersect the south lode, at 3*l.* per fathom. We are pushing on the stamping, but the shortness of water is keeping us back very much.

HOBB'S HILL.—P. Temby, Sept. 29: Setting for October: The deep adit level to drive west by six men, at 7*l.* per fathom; the ground is very much harder for driving in. This morning we met with a cross-course, which I think will change the ground again; no lode has been taken down in this level for the last 3 fathoms driving. The shaft on the hill to sink by four men, at 4*l.* per fathom for 12 ft. long; the lode is 4½ ft. wide, and worth 12*l.* per fathom. Our horse-whim will begin to draw the stuff from this shaft on Monday next.—Tinner's Lane: We have commenced sinking again in the cross-course by four men, at 3*l.* 15*s.* per fathom. The bottom stopes by six men, at 2*l.* 10*s.* per fathom; the lode is 10 ft. wide, and of its usual value. We have driven west 3 fms. through the old men's working, and are daily expecting to reach the end of the ground, where I expect to find a good lode.

HINGSTON DOWN CONSOLS.—J. Richards, Sept. 29: The lode in the stope in the bottom of the 140 continues to be worth for copper and tin ores 50*l.* per fathom; and all other points throughout the mine are without alteration.

LEEDS AND ST. AUBYN.—Sept. 17: Setting Report: The engine-shaft to sink below the 10, by six men, at 12*l.* per fathom; lode 2½ ft. wide, worth 5*l.* per fathom. A winze to sink below the adit, west of the engine-shaft, by four men, at 3*l.* per fathom; lode 5 ft. wide, worth 8*l.* per fathom. Kendall's flat-rod shaft to clear below the surface, and to secure with timber, by nine men and three boys, at 3*l.* per fathom; this shaft will be holed to the adit in a fortnight from this time, we shall then commence sinking below, from which we shall increase our returns of tin. There are three men sinking a bob-pit to this shaft, which will be completed about the time the shaft is holed. The adit level to drive west of the Whip shaft, by two men, at 1*l.* per fathom, and 10*s.* in 1*l.* tribute; lode 18 in. wide, worth 2*l.* per fathom. The adit level to drive east of the Whip shaft, by two men, at 1*l.* per fathom, and 10*s.* in 1*l.* tribute; lode 2 ft. wide, saving work, but not rich. The 12 to drive east of Dingle's shaft, on the Standard lode, by two men, at 15*s.* per fathom, and 10*s.* in 1*l.* tribute; lode 8 in. wide, passing through ground that will be taken away by tributers at 12*s.* in 1*l.* The 12 to drive west of Dingle's shaft, by two men, at 15*s.* per fm., and 10*s.* in 1*l.*; lode small. In the tribute department we have six men, on an average of 10*s.* in 1*l.*

LLYWERNOG.—J. Davis, Sept. 29: We shall finish cutting down the engine-shaft to the 30 in about nine days; then we shall have to cut down a thin stope, wedge like, for about 9 ft. below the 30, before we commence to cut a cistern-plat in the 40 for the plunger-lift.

MAES-Y-SAFN.—Sept. 27: The 350, west of Grosvenor's shaft, is worth about ⅛ ton per fathom. The 310 west is still in a hard and unproductive bar of ground. The 370, east of sump-winze, is unproductive, and the ground hard for driving. The 370 west is worth ⅛ ton per fathom. The 350 east is producing a little lead ore mixed with blende; this end looks kindly to improve. The stopes in the bottom of the 310, west of Grosvenor's shaft, are producing 1 ton per fathom. The stope in the back of the 310 east has improved a little, now worth 1¼ ton per fathom for a length of 5 yards. There is no improvement to notice in any other stope or tribute pitch throughout the mine.

MARKE VALLEY.—John Truscott, Sept. 26: Marke's Lode: The 136 east is producing a little saving work. The 136 west is producing 1 ton per fathom. The 124 east is producing saving work. The 124 is producing 3 tons per fathom. The 112 east is poor. The 100 west is producing occasional stones of ore.—Sarum Lode: The 100 east is producing a little saving work.—Rose Down Lode: The 70 west is yielding 4 tons. The 60 west is yielding 1 ton. The 50 west is unproductive. The 40 west is yielding saving work. The 20 east is yielding 3 tons. The 10 east is yielding 2 tons.

MINERA UNION.—J. Nicholls, Sept. 29: No change of importance to notice in the mine since last report; everything going on favourably.

MOUNT PLEASANT.—William Wasley, September 29: We sold on Tuesday 7 tons 18 cwts. of ore, at 12*l.* per ton cash, without any expense. Bright's shaft continues very hard for sinking. The tributers working near Bright's shaft are getting good quantities of ore, and their pitches looking promising.

NANTEOS CONSOLS.—T. Thomas, Sept. 29: Penrhiw: The stope in the back of the 26, west of old winze, is producing about 8 to 10 cwts. of lead ore per fathom. The stope west of Daniel's winze, below the 26, is producing about ½ ton of lead ore per fathom; east of ditto it will produce about 6 cwts. of lead ore per fathom. We sold from this mine to the Burry Port Smelting Company last week a parcel of lead ore (computed) 25 tons, at 11*l.* 5*s.* 6*d.* per ton.—Bwlch Gwyn: We have nearly completed the erection of the round buddle, and the masons are getting up the walls for the drawing machine, which we hope to have shortly at work.

NEW CROW HILL.—Albert Kent, Thomas Trelease, Sept. 27: In the 100 fm. level cross-cut we find the ground somewhat easier than it has been for several weeks, consequently our progress in driving is better. We find the surface water to be very slack, but we are keeping the mine in fork thus far, and hope that we shall be able to do so until we get rain, which would relieve us from the difficulty which the scarcity of water now gives us.

NEW VICTORIA (Ashburton).—Wm. George, jun., Sept. 26: The drawing-lifts are at surface, the last having been hauled up to-day. We are now engaged in getting the shaft prepared for hauling, which will be completed in seven or eight days, or it may be by Saturday. At surface we are repairing the landing brace and tramroad, and shall have all ready in time for the underground work.

NEW WHEAL GRYLLS.—P. Floyd, Sept. 29: We have commenced to drive the 10, east of Cock's shaft, on the Standard lode, by four men, at 3*l.* per fm.; lode 3 ft. wide, producing average work for sampling, and of a most promising appearance to improve. We have now about 400 barrows of tinstone for sampling, and when sampled you shall know the result.

NEW WHEAL TOWAN.—R. Pryor, Sept. 28: The adit level driving west on the tin lode continues to yield saving work for tin, and presents a better appearance. The lode in the adit level driving west on the copper lode is producing stones of copper ore.

NORTH CROFTY.—J. Vivian and Son, W. Thomas, Sept. 29: In the 220, west of engine-shaft, the ground continues speedy for driving through. In the 208, west of Petherick's shaft, we are at present driving on the north part of the lode, which is composed chiefly of spar, with copper ore and mundic inter-spersed, the tin part lying on the south; the lode altogether is worth 20*l.* per fathom. The lode in winze sinking under the 196 west is worth 15*l.* per fathom. The lode in the 160, east of Rowe's winze, is worth 20*l.* per fathom. The lode in the winze sinking under the 150 west is worth 20*l.* per fathom. We shall sell about 11 tons of tin on Saturday next.

NORTH DOWNS.—F. Pryor, J. Williams, Sept. 27: In the sump-winze below the 70 we are getting through the dark floor of killas, but the character of the ground is much the same as above the elvan; the lode is the same size and value, and worth for the length carried 12*l.* per fathom. In the 70, west of western winze, we have a porous lode 2 ft. wide; the water is issuing freely from the end, and appears to be drawing the winze in the bottom of the 60, which will be resumed as soon as possible. We have not cut anything worthy of remark in the 60 cross-cut south since our last. In the Midway level, west of rise, the lode is at this time poor, but the ground is considerably eased, and rapid progress is being made; as the lode is subject to splices we are daily expecting a change for the better. The stope in the bottom of the 70, west of sump-winze, is worth 12*l.* per fathom. The stope in back of the 70, west of western winze, is worth 7*l.* per fathom. The stope in the bottom of the 60, west of Roger's winze, is worth 6*l.* per fathom.

NORTH POOL.—September 29: Ballarat Shaft: The lode in the 40 east still continues to increase in size, the width now being 4 ft., with good seams of yellow copper ore. We are abour setting the stopes, &c., in the 24, and placing men to sink this shaft below the 52, or 72 fms. from surface. We are about to enter 20 tons of copper ore for sale at the Ticketing.

NORTH ROSKEAR.—R. Goldsworthy, R. Angove, September 27: There is no change to notice in any of the underground bargains since last report. From the long-continued drought we have had it has sadly interfered with our drawing operations in Wheal Crofty.

OLD GUNNISLAKE.—F. Phillips, Sept. 28: In the cross-cut we have a very favourable change in the ground, and I think very much better progress will now be made. I like it much better also for the prospect of the lode, to which we must now be in close proximity. No other change since last week.

OLD TREBURGETT.—W. Hancock, Sept. 29: The engine-shaft is cut down and secured 5 fathoms below the 10. I thought to have succeeded in reaching the 20 with our present drawing-lift, but owing to the junction with the old underlie shaft I find it will not be possible; therefore, I have decided at once to fix a plunger-lift in the 10 fm. level. I have let it to the men, and no time will be lost in getting it completed, as well as cutting down the shaft. When this is done we shall make greater progress in getting the water under. We have taken down the portion of the lode in the shaft mentioned in my last report, which makes a good pile of silver-lead at surface. There is now a good branch of silver-lead on the footwall of the shaft, producing 1½ ton per fathom for the length of shaft. Two men are now engaged clearing the 10 fathom level, south of shaft; the capel part, as far as we can see, is standing, but on each side of the capel the ground has been removed for silver-lead. At present I cannot put a value upon the capel, but at any rate we can see good spots of silver in it. The capel is 3 ft. wide, or more, and carries a great quantity of blende, which, no doubt, also contains silver. The lode in the deep adit end, south of John's shaft, still produces good stones of lead, and from its appearance promises soon to become valuable. We have fixed another lift of pumps in the Grinder shaft, and hope to have the water out in a few days. We shall commence next week to make a reservoir for water for condensing and dressing purposes. All the work is progessing favourably, but our principal attention is directed to getting the engine-shaft cleared to the 40, at which point the entire mine can be explored for silver ore and silver-lead.

PEDN-AN-DREA UNITED.—W. Tregay, J. Thomas, Sept. 24: Sump Shaft: We have set the rods and pumps to complete, for sinking below the 140, per bargain. In the 140 west the lode is worth 14*l.* per fathom. The stope in the back of this level yields 10 cwts. of black tin per cubic fathom; lode 12 ft. wide. In the 120 east the lode is worth 6*l.* per fathom. In the 120 west, on north lode, the lode is worth 12*l.* per fathom, very hard, and letting out much water. The 100 east is not yet holed; there are several branches here, producing stones of tin.—Cobbler's Shaft: In the 130 west, the end on Martin's lode has for some time been in abeyance, but there is a very promising piece of ground here, and and we have set the end to drive by four men. In the 120 west the lode has improved, and is now worth 12*l.* per fathom.—North Shaft: In the 90 east the lode is worth 6*l.* per fathom. In the 90 west the lode is worth 15*l.*, but we think there is more of the lode further north, where there is a large stream of water, and have set the men to cross-cut in that direction. In the 80 east the lode is worth 6*l.* per fathom; 80 west, 8*l.*; 70 west, 8*l.*; 60 east, 20*l.*; 60 west, 20*l.*; 55 east, 13*l.*; 55 west, 20*l.*; 47 east, 15*l.* In the 47 west the lode produces good stones of tin. The lode in the bottom of Cardozo's shaft is worth 12*l.* per fm. We sold on Wednesday, at Bissoe, 14 tons 2 cwts. 0 qrs. 10 lbs. of black tin, for the sum of 1061*l.* 0*s.* 1*d.*

PENHALLS.—S. Bennetts, W. Higgins, Sept. 24: The ground in the 80 cross-cut north seems changing, and we think the lode is near. The stope in the back of the 70 is worth 10*l.* per fathom. The 60 west continues unproductive. The 50 east, on the Downright lode, is also unproductive, and the eastern part of the cross-course not as yet found. The rise above this level is worth 10*l.* per fathom. The stope in the back of the 50 west, on the north lode, is worth 7*l.* per fathom. There is nothing further discovered as yet in the 80 north, on the

west cross-course. The stope above the 10, at the flat-rod shaft, is worth 15*l.* per fathom. The 60 west, from Glynn, is producing a little tinstuff, and the 50 west is worth 7*l.* per fathom. At Sarah's shaft the 17 west is worth 7*l.* per fathom, and the 14 east 10*l.* per fathom. The two stopes above those levels are worth respectively 15*l.* and 8*l.* per fathom. The pitches throughout the mine are on the west with below the 44; this, we think, is a continuation of the run of tin ground from the 30 upwards, which has already proved so valuable. The West Pink shaft is being cleared for drawing, &c.

PENHALE UNITED.—R. Pryor, H. Bennetts, J. Pryor, Sept. 28: Setting Report: Phillip's Engine-Shaft: The 110 to drive north of this shaft, by six men, at 3*l.* 5*s.* per fathom, and if communicated to the 110, south of Hall's shaft, within a fortnight to be paid 3*l.* 10*s.* per fathom; the lode is 2 feet wide, and worth 4 cwts. of lead per fathom. This level to drive south of shaft, by two men, at 2*l.* 15*s.* per fathom; the lode here presents a better appearance than for some time past, and worth 5 cwts. of lead per fathom. The lode in the 100, south of shaft, is 3 feet wide, and worth 10 cwts. of lead per fathom. The lode in the 100, men, at 3*l.* per fathom.—Hall's Shaft: The 110, to drive north of shaft, by four men, at 3*l.* 15*s.* per fathom; the lode is worth 4 cwts. of lead per fm., and likely to improve. This level to drive south of shaft, by six men, at 3*l.* per fathom, and if communicated to the 110, north of Phillip's shaft, within a fortnight from this time to be paid 3*l.* 10*s.* per fathom; the lode is 2 feet wide, and worth 4 cwts. per fathom. The 100, to drive north of shaft, by two men, at 3*l.* 5*s.* per fathom; the lode is producing good stones of lead, and promising an improvement. The 80, to drive north of shaft, by four men, at 4*l.* 15*s.* per fathom; the lode here is 3 feet wide, producing stones of lead, and letting out water freely, which is a good indication.—Leggo's Shaft: The 48, to drive south of shaft, by two men and two boys, at 3*l.* per fathom; the lode is worth 3 cwts. of lead per fathom. We also set our usual number of tribute pitches, at tributes varying from 5*l.* to 10*l.* per ton. We sampled to-day (computed) 35 tons of silver-lead. The pay and setting passed off very satisfactorily.

PENHALE WHEAL VOR.—W. H. Martin, Sept. 27: The engine-shaft sinking below the 130 has been continued on the course of the south lode with good speed, now down 5 fms. 3 ft. At present the men are engaged repairing the whim-shaft to receive the steam whim-kibble. The 130 cross-cut is driven north 4 fms. 4 ft. 6 in. The ground in the end is much the same as for some time past. We intend to put the steam-whim to work to-morrow. The erection of the landing brace and other necessary work is proceeding satisfactorily. Our pumping engine is working very well.

PENRHYN.—M. Whitford, Sept. 28: Good progress is being made in forking and clearing up the engine-shaft, although very troublesome to do, down about 6 fms. below the 20. The two stopes in the back of the 20, east of engine-shaft, are much the same as last reported—one set at 3*l.* per fathom, and the other not set as yet. In the stope in the back of the 10, east of engine-shaft, the lode is 2 ft. wide, yielding good lead ore; set at 4*l.* per fathom. In the adit end, on the north and south lode, the lode is 2 ft. wide, producing good stones of lead ore; set at 9*l.* per fathom. The lode has a very kindly appearance for further improvement. In the winze sinking in the bottom of the adit level, on the north and south lode, the lode is 1¼ foot wide, with stones of lead ore; set at 7*l.* 10*s.* per fathom. In the end driving west on the course of the lode, from the Cliff, the lode is 2 ft. wide, showing good spots of lead; set at 7*l.* 10*s.* per fathom. The surface work is being urged on as fast as possible.

PERKINS BEACH.—Report by Mr. Goodman Ellis, the manager of Talargoch Mine:—In handing you my report after an inspection of the mine, it is with much pleasure that I say I consider it to be a most valuable property. I had scarcely time to go through all the old workings, and confined my attention more to where the present workings are carried on. The first point noticed was a nice looking lode at the mouth of the adit, from which I was informed stones of lead ore had been picked; this lode I consider worth trying further.—Sump: South of deep adit level in great spar vein, this was full of water, and men were at work commencing to clear it.—Cross Vein: The deep adit crosses this vein 260 yards from its mouth; this is a strong well-looking vein. On the north side of adit is an elbow, which I recommend should be tried.—Pump Sump: There is very favourable ground and good ore in this sump; this shows every appearance of improvement, and I shall expect it to return a great quantity of ore.—Walker's Vein: This vein has been cut by crossing south, 75 yards from cross vein; I have much pleasure in stating that this looks well. I cut a ¼ ton of lead ore in about 10 minutes while exploring it, and the end looked much better when I left it; the ore appeared much stronger going down in this winze picking westwards. I think by sinking deeper a great quantity of ore will be found here, as the ground looks more settled going down. The south cross has been driven 146 yards from the cross-vein to intersect the great spar vein and Birch's vein; this is one of the best trials on the mine.—No. 1 Caunter: There is nothing doing here, but judging from appearances, I think good ore has been raised in former times.—No. 2 Caunter: This looks well, has a good run of ore picking west, as all the other runs do, and the deeper they go better ore is got, and I have no doubt this trial will improve as they go deeper.—Engine-Shaft: The engine works well, and is in good order.—The 20 fm. level: This level was not clear for me to see the sole, but judging from what I could see of end and forebreast, it appeared to be in very favourable ground, composed of strong white elvan, full of a lode here 9 feet wide. My strong advice, upon the whole, is that that you should go deeper, as in addition to the ground becoming more settled, as one lode dips north and the other south they must meet in the deep, and I am sure when they come together a great body of ore may be reasonably expected; another point which enhances its value is there being so little water in the adit, and with a small hydraulic power you can probably go very deep without further machinery, and I have no doubt it will eventually prove a very profitable mine.

— Edward Davies, Sept. 28: The pump sump continues good, and we have now reached a course of very congenial lime spar and lead ore, which all miners delight in, and should it continue the yield will be as good as it now is. Walker's winze continues good, and nice stones of ore are still taken from it. In the winze the ground improves as depth is attained. The south cross-cut is very hard; the end lets out a quantity of water, which evidently betokens a near approach to the vein. In the 20 we are driving west, and have already entered a favourable change of ground. To-day we sampled 20 tons of lead ore for sale on October 6.

PERRAN CONSOLS.—J. Nance, Sept. 27: Flat-Rod Shaft: The ground in the 30, east and west of shaft, has greatly changed in the last day or two, being more genial for tin, and in favour of driving; the lode is 4 ft. wide, producing some good work, very similar to that which we had in the level above some little time before cutting the run of ore. In the 20, east of shaft, the lode presents a kindly appearance, worth for tin 5*l.* per fathom. In the stope in the back of this level the lode is worth from 5*l.* to 6*l.* per fathom. In the 20, west of shaft, no lode has been taken down during the week. We have been driving by the side for speed; when last broken it was worth 6*l.* per fathom In the stope in back of this level the lode is worth 7*l.* per fathom. The lode in the rise in back of the 10 fm. level, against the western shaft, is 2 ft. wide, yielding saving work. The men in the adit are getting close to the west shaft, and will shortly be clear. The tributers are working well.

PRINCE OF WALES.—J. Gifford, W. Gifford, Sept. 27: Saturday last being pay and setting day, the following bargains were set:—To drive the 77 west, by six men, stent the month, at 7*l.* 15*s.* per fathom; here we are at present cutting through the lode, which so far as seen is yielding some good saving work for copper. To drive the 77 cross-cut south, by two men, stent the month, at 2*l.* 15*s.* per fathom. To drive the 65 west, by two men, 1 fathom, at 6*l.*; the lode in the present end is 3 ft. wide, yielding occasional stones of copper ore—a strong and promising lode. To drive the 55 west on No. 2 north lode, the month, at 2*l.* 15*s.* per fathom; the lode in the present end is 2½ feet wide, composed of capel, quartz, and flookan, with stones of arsenical mundic intermixed throughout. A stope in the back of the 65 west, by six men, at 3*l.* per fathom, for one month; lode worth 10*l.* per fathom. A stope in the bottom of the 55 west, by two men, for one month, at 3*l.* 5*s.* per fathom; lode worth 9*l.* per fathom. A winze in the 55 east, by four men, stent to hole, at 7*l.* per fathom; lode worth 10*l.* per fathom. We have two stopes in back of the 65 east, working by eight men, worth on an average 12*l.* per fathom each. One stope in the back of the 55 east, by four men, worth 15*l.* per fathom. A stope in the back of the 45 west, by two men, worth 6*l.* per fathom. We shall commence taking down the lode in the 77 east to-morrow, when we shall set the same, and advise you on Thursday. We are pushing the sinking of Watson's shaft with all possible speed. We hope to sample a parcel of copper ore on Friday next of good quality, about 60 tons, and the end of October about 100 tons, in two parcels.

— J. Gifford, W. Gifford, Sept. 24: The 77 east to drive by the side of the lode, at 6*l.* per fathom. To take down the lode in back of the 77 east, at per bargain 12*l.*; lode worth 10*l.* per fathom.

PRINCE ROYAL.—P. Floyd, Sept. 29: In the new shaft, in the 8 fm. level, driving east, the lode is 18 inches wide, and worth 20*l.* per fathom; driving at 3*l.* 10*s.* per fathom, by four men. The ground is still very congenial for tin, and by extending this end 10 fathoms further east we shall come under a run of tin ground gone down in the level above. We expect to cut the lode in the east shaft by the end of this month; the ground is favourable; sinking by four men, at 3*l.* per fathom. All other work is going on in a very satisfactory manner.

PRINCESS OF WALES.—T. Foote, G. Rickard, Sept. 28: Harris's engine-shaft is in regular course of sinking below the 50 by nine men; the ground is of a more favourable nature than for some time past. The lode in the 50 east is all the end big, with a portion standing on each side of the driving. The part we are carrying is presenting a most promising appearance, composed of peach, friable spar, rich-looking gossan and mundic, heavily charged throughout with good quality copper ore. A more kindly lode we never saw, and shall not be surprised if a good course of ore is met with any day. The lode in the 50 west is composed of peach, spar, and mundic, spotted with yellow and black copper ore. The engine and pitwork are in excellent condition, and working well.

QUEEN (Harrowbarrow).—W. Knott, Sept. 28: We have intersected the No. 2, or copper lode, in the 20, south of engine-shaft, which lode is 1 ft. 6 in. wide, composed of quartz, peach, and prian, strongly impregnated with copper and mundic—a regular, well defined lode, and one of very great promise. We are now opening by the side of the same, both east and west from cross-cut, and in the course of a few days we shall be able to say more particularly as to its value per fathom. I judge from present appearances the value to be about 6*l.* or 7*l.* per fathom. In the 30, west of Cook's shaft, the lode in the end is about 20 in. wide, and will yield about 3 tons per fathom of copper-mundic; value about 6*l.* In the 30 east the lode in the end is 18 in. wide, and will yield 4 tons per fathom; value, 10*l.* per fathom. I have taken two men out of each of these ends, and put them to stope behind the end.—Silver Department: At Bennett's western shaft we have sunk a few feet for a fork below the 10, at this shaft, and commenced cutting a plat; we have broken from this point since my last five bags of moderate quality silver ore, and one of rich quality. Paull's winze is now 9 fms. 2 ft. below the adit level, the lode in which continues of a very promising character, and producing occasional stones of silver. We shall sample two more parcels of silver in the course of a fortnight. The building of the engine-house will be completed in a few days from this date.

REPERRY.—Thomas Parkyn, Sept. 27: Everything here is progressing towards completion, and we expect to cut the lode before next Monday. The engine and stamps-buddles, tyes, floors, and horse-whim will be ready in the course of a few days. The country could not be more congenial for tin; and I expect when we cut the lode we shall have it very good indeed. I do not see how it can be otherwise when I consider the lode we carried in the 15 fm. level.

RHYDYALOG.—James Dunkin, Sept. 28: I have no alteration to report in the 15 fm. level. We shall complete clearing up by the 29th instant, when we shall immediately commence driving and sinking. The level cleared north, on the north and south lode, in the 15, is not extended far enough to intersect the parallel east and west lode. I think it advisable to extend this, but shall wait your reply before commencing. I think this a very important point. We are pushing on as fast as possible all points of operation, and I am well pleased with the mine as far as seen.

REDMOOR.—F. Bennetts, Sept. 29: There is no change to notice in the lode in the footway shaft, sinking below the adit; it is worth 15*l.* per fathom. The lode in the end, driving west of the winze, below the adit, is worth 5*l.* per fathom. The lode in the stope west of the winze, below the adit, is worth 4*l.* per fathom. The lode in the stope in the back of the adit, west of the rise, is worth 7*l.* 10*s.* per fathom. There is no increase of water for dressing as yet.

ROARING WATER.—H. Thomas, Sept. 27: During the past week we have been driving in a beautiful white killas, containing strings of yellow ore on the south side of the lode; by the end of this week I expect we shall have 2 fathoms of the lode, when it will be taken down. By adopting this mode of procedure more progress will be made, and the lode can be taken down clean by itself, and free from the killas; this will be done before my next report. More promising ground for producing mineral can scarcely be seen, and as we advance west everything seems to confirm my opinion that an improved state of things will soon take place.

ROCHE CONSOLS.—Thos. Parkyn, Sept. 28: I have this day put the men to drive south to intersect the new north lode. I expect to intersect it this week, when I will instantly report to you the result. I have let the foundations of the engine-house to be taken out at 3*s.* 6*d.* per cubic fathom. I have sent the tenders from the masons and stone raisers, carriers, &c. The engineers have commenced to take down the engine purchased, and it will be brought on the mine as early as possible. Your engineers, Messrs. Hocking and Son, will be up on Friday with plans, &c., for the house.

ROSEWALL HILL AND RANSOM.—Joshua Daniel, W. Bugelhole, Sept. 28: Standard Lode: The lode in the 110, driving east of Ransom shaft, is 15 in. wide, worth 7*l.* per fathom. The lode in the 100, driving east, on the north part, has further improved, now worth 10*l.* per fathom. The lode in the 90, driving east, on the south part, is poor. The lode in the stope in the bottom of this level, on the north part, is 2 ft. wide, worth 35*l.* per fathom. The lode in the winze sinking below the 90 is 1 ft. wide, worth 8*l.* per fathom. The lode in the 80, driving east, is producing saving work for tin. The lode in the 70, driving east, is 1 ft. wide, worth 8*l.* per fathom. The lode in the 50, driving east, is 9 in. wide, and worth 5*l.* per fathom. The lode in the 30, driving east, is 1 foot wide, worth 6*l.* per fathom. The lode in the 20, driving east, is 6 in. wide, yielding a little tin. There is no change in the 100 and 90 fm. level cross-cuts, driving north, since our last report.—Eastern Carbona: The lode in this carbona, stoping in the back of the 100, is 5 ft. wide, worth 15*l.* per fathom. Our tribute department is much the same as last reported.

SOUTH CARADON.—William Rule, John Holman, Sept. 27: Our engine on Pearce's shaft is now complete and working in good order, everything in connection with it being accomplished quite in time to take the water as it came to us from the adjoining mine. We, therefore, consider ourselves in a safe position as regards any water from our neighbours for the future. The mine still looks well, as for some considerable time past; and should we see a better state of things in the copper market, which we are constantly expecting, it will enable us long to pay you good dividends.

SOUTH CONDURROW.—Joseph Vivian, William Williams, Sept. 29: In the 72, west of King's shaft, the part of the lode being carried is 3 ft. wide, leaving a large mass of lode still standing to the north, and is worth about 26*l.* per fm. In driving the same level west of the eastern cross-cut, on the same part of the lode, of which we are carrying a width of about 3 ft., the lode is worth about 15*l.* per fathom. In the 61, west of King's shaft, the lode is 4 ft. wide, worth about 20*l.* per fathom. We have communicated the rise over this level with the winze sunk under the 51, which has afforded excellent ventilation to that part of the mine, and thrown the ground open for stoping, in which we have now 12 men engaged on a lode worth about 18*l.* per fathom. In the winze sinking under the 61 west the lode is 4 ft. wide, worth about 10*l.* per fathom, with an improving appearance. In the 61 east, on the north branches of the tin lode, we are still cutting further north, and discovering more lode, quite as good as that already driven through, and we now estimate this end to be worth full 90*l.* per fathom for the whole length of the lode thus far laid open, a width of about 15 ft. At different operations east of shaft, and at the other points, there is no alteration worthy of notice. The stopes throughout the mine looking well.

SOUTH DARREN.—John Boundy, W. H. Boundy, Sept. 26: Saturday last being our pay and setting day, the following bargains were set:—The 80 to drive west by six men, at 11*l.* 5*s.* per fathom; the lode in the end is 2 ft. wide, producing good lead and copper ore—a very promising lode, and showing every indication of a speedy improvement. The lode in the 70 west is 2½ ft. wide, yielding good lead and copper ore, worth 8*l.* per fathom, and there is every appearance of its improving; set to six men, at 10*l.* 5*s.* per fathom. We shall commence to sink a winze in the bottom of this level shortly to meet the 80, driving west; and we calculate this winze will go down through a good piece of ore ground, judging from the appearance of the lode driven through at this level. To stope the back over the 70 west by six men, at 80*s.* per fathom; the lode is 2½ ft. wide, worth for lead and copper 14*l.* per fathom. To stope the back over the 70, east from the winze, by four men, at 80*s.* per fathom; the lode is 2 feet wide, worth for lead and copper 12*l.* per fathom. To stope the back over the 70, west from the winze, by six men, at 8*s.* per fathom; the lode is 3 ft. wide, worth for lead and copper 14*l.* per fathom. The 60 to drive west by six men, at 10*l.* per fathom; the lode is 2 ft. wide, worth for lead and copper 9*l.* per fathom, and from its character we expect an improvement. To stope the back over the 60 west by four men, at 80*s.* per fathom; the lode is 2 ft. wide, worth for lead and copper 12*l.* per fathom. To stope the back over the 60, east from ditto, by two men, at 75*s.* per fathom; the lode is 2 ft. wide, worth for lead and copper 7*l.* per fathom. To stope the back over the 50 west by four men, at 85*s.* per fathom; the lode is 2½ feet wide, worth for lead and copper 11*l.* per fathom. The shallow level to drive east by two men, at 6*l.* 10*s.* per fathom; the lode is 1 ft. wide, producing a little copper and sulphur, but not to value. We are getting on as fast as possible with our dressing towards another sampling.

SOUTH HERODSFOOT.—W. Goldsworthy, Sept. 23: In driving east on the slide in the 100 we have discovered a small branch of flookan and mundic, and I have placed the men to open a little north on its course to see if it will improve as it gets off the influence of the slide. No change to notice in the cross-cut east; the ground is still favourable, and the men are making good progress in driving.

SOUTH HERODSFOOT.—W. Goldsworthy, Sept. 29: We are making good progress in driving the 100 fm. level north and east, but we have no particular change to notice since my last advice. The engine and pitwork are in good order.

SOUTH MERLLYN.—Sept. 29: Vicker's Shaft: The lode in the 100 yard level is increasing in size, and producing the same quantity of lead ore as last reported. In the sump sinking below the 80 yard level south the lode continues about 18 in. wide, with the same portion of lead as advised in my last week's report. No other change.

ST. JUST AMALGAMATED.—T. Gundry, N. Bartle, Sept. 27: No change worthy of remark has taken place in this mine during the past week. Saturday next being our pay and setting, a full report shall be sent you.

TAMAR VALLEY.—John Goldsworthy, Sept. 29: In the rise in the back of the 37, south of Weston's engine-shaft, the lode is 3 ft. wide, worth 10*l.* per fathom, with indications of laying open a good piece of tribute ground. In the 27, south of Weston's engine-shaft, no lode taken down this week. I look forward to see a good lode in this end shortly. The tribute pitches are without material change to notice. We are making good progress in dressing.

TANKERVILLE.—A. Waters, Sept. 29: The shaft below the 92, and the stopes throughout, on the Tankerville lode, are yielding their usual quantities of ore, being without change since my report of last week. The shaft from surface, as well as the adit cross-cut in connection therewith, are being pushed on as fast as possible. We have this week put in 15 sets of timber, and cased and divided the old shaft from surface 15 fms. down, repairs that were much needed, but which have made the shaft secure for the next ten years. We have not drawn any leadstuff to surface for the week, but shall now pull up without delay, and in good time for the sampling next week.

TEIGN VALLEY.—J. Cornish, Sept. 28: In clearing and securing the adit level north we discovered the lode had been lost, and the old level driven on by the east side of it. When we saw this we at once commenced to drive northerly on its course, instead of clearing the old level, and now we have the lode 5 feet wide in the end, consisting of sulphurous mundic and lead ore, associated with quartz, flookan, prian, &c., certainly showing strong indications of improvement in extending the drivage north, and opening on it at a deeper point. The air-machine answers well, and forces enough air for the men to work very comfortably without any hindrance. A few more zinc air-pipes are still wanted to follow the advance of the end, and I would also recommend a tramroad to be laid down to the end, as the removal of the stuff by wheeling to the tramroad now laid down on the barytes course almost costs as much as the end could be driven for were a proper tramroad laid down.

TREREW.—Sept. 26: The lode in the 32 fathom level south continues large and poor, and harder than it has been. The lode in the winze, which is down 8 fms. 1 ft. below the 20 fm. level, is speedy enough, but we could not sink any deeper for want of air. We have set the 32 end to drive on a short distance in killas. We have set the 20 end south to drive by four men, at 2*l.* 2*s.* per fathom. We have put two men to sink the new shaft in the Moor; the lode is from 3 to 4 ft. wide, and looks very kindly.

TYGWYN.—Sept. 26: During the past month Tygwyn shaft has been sunk 1 fm. 3 ft., and we have fixed the cistern, &c., in the 15. We expect the new lift on the mine on Wednesday, when we shall resume the sinking and cut into the lode at once. We have set the shaftmen to rise in back of the 15, west of shaft, at 6*l.* per fm.; should the water stop the men in the bottom for a few hours at any time they can work in the rise, and this will show the dip of the shoot of ore left standing in the west end of shaft. The shallow level cross-cut has been driven south 1 fm. 2 ft., at 6*l.* 15*s.* per fm.; cut and driven through a lode running 20° west of south, about 1 ft. wide, composed of a strong gossan and sulphur; but as we have seen other lodes still further south we continue the driving of the cross-cut, which has been set for one month, at 5*l.* 10*s.* per fathom.

VIRTUOUS LADY.—H. Horswill, Sept. 28: The cross-cut never looked so promising as it now does; the end is in beautiful-looking killas, with branches of mundic crossing the end, all underlying south; we surely cannot be far off from the lode. In the south adit the lode is all that can be desired, producing gossan, quartz, black and beautiful yellow ore of rich quality. All the end must be saved for dressing, and will yield first-class ore; we do not know the width of the lode, as our end will not carry it, but we shall drive further to hill, and cross-cut it by-and-bye. I unhesitatingly say that this is the best-looking lode I have seen for many years. Nothing new to report upon in any other part of the mine.

WEST CARADON.—Capt. Richards, Sept. 27: Marina's Shaft: Allen's lode at the 55, west of cross-course, is improved, now worth about 2 tons per fathom. The same lode, east of cross-course, is worth 2 tons per fathom. The winze sinking below the 42, on this lode, will produce 1½ ton per fathom. In the 42 west the lode has a much better appearance, composed of quartz, fluor-spar, and good stones of yellow copper ore. In the same level east the lode is worth 1½ ton per fathom. Nothing new in the cross-cut driving south. The carpenters are busily engaged putting on the roof of the new engine-house.

WEST CWM ERFIN.—Sept. 26: At the adit level, east of engine-shaft, the lode is 3 ft. wide, and contains spots of ore occasionally; it is now taking a more southern direction, which is a good indication, and has also changed its underlie from north to south, but as it is thought proper we have suspended the driving here for a while: however, this level should be continued on eastward into that fine piece of virgin ground when convenient. The cross-cut north is being pushed forward as fast as possible, and joints are continually being met with, which contain spots of lead and copper; ground still hard for exploring.

WEST DRAKE WALLS.—T. Gregory, Sept. 28: The lode in the 54 fathom level east is producing saving work for tin for the part being carried. In the 54 fm. level west the lode is 4 ft. wide, composed of quartz and peach, with good work for tin, and stones of copper ore intermixed occasionally.

WEST JEWELL.—John Mayne, Sept. 29: Greene's Engine-Shaft: In this shaft we are progressing very favourably in clearing and securing it. At Freeman's shaft, sinking below the 17, the lode is worth 6*l.* per fathom. In the 17, driving west, the lode is improving, now worth 8*l.* per fathom. In the winze sinking below the 17, 12 fms. west of shaft, the lode is worth 12*l.* per fathom. In the 17, driving east, the lode is improving, now producing good stones of tin. We sampled 50 tons of tributers' tinstuff on Tuesday last; several tons of it is worth 8 cwts. of black tin to a ton of stuff. There is no alteration of any importance in any other part of the mine. The engineers are erecting the engine as fast as possible, and all other operations are being pushed on with vigour.

WEST GODOLPHIN.—John Pope, Sept. 28: The engineers expect to have the bob of the engine into its place to-morrow; all the works are progressing favourably. A full report will be forwarded for the directors' meeting.

WEST MARIA AND FORTESCUE.—W. Skewis, J. Donual, Sept. 29: West Maria Lode: There is no change to notice in Willesford's shaft, sinking below the 71 fm. level. We have just commenced taking down the lode in the 71 east; so far as seen there is no change from last taking down, worth 18*l.* per fathom. The rise and winze is holed by a borer hole, and will be knocked through so as to take down the lode in each place by next report. The lode is cut through in the 71 west, it is 10 ft. wide, yielding good stones of ore. No. 1 stope, in the back of the 60 east, is worth 15*l.*, and No. 2 stope 20*l.* per fathom. The stope in the bottom of this level, west of shaft, is worth 20*l.* per fathom. The ground by the side of the lode in the 60, west of Maria engine-shaft, is improved. There is no lode taken down in the 50, east of Willesford's shaft, this will be done in time for next report.

WEST PRINCE OF WALES.—J. Gifford, Sept. 27: In the cross-cut north, in the bottom of the shaft, we have intersected the wall of a branch or lode, and have set the end at 8*l.* per fathom, 1 fm. stent, or cut through the lode.

WEST ROSE DOWN.—J. Truscott, Sept. 26: Statement of our monthly setting and ground measured for the past month:—The 90 to drive west, on Rose Down lode, 2 fathoms stent, by four men, at 8*l.* per fathom; measured 2 fms. 2 ft. The lode continues 1½ ft. wide, yielding occasional stones of copper ore. The 80 to drive west on Rose Down lode, 2 fathoms stent, by four men, at 10*l.* per fathom; measured 1 fm. 5 ft. The lode is chiefly composed of quartz, intermixed with mundic and a little copper ore. To drive the 85 cross-cut north 2 fathoms stent, by six men, at 10*l.* per fathom; measured 2 fms. 3 ft. 6 in. To drive the cross-cut south 1 fathom stent, by six men, at 18*l.* per fathom; measured 1 fm. 3 ft. 6 in. We have intersected a branch 9 in. wide, composed of gossan and quartz, and letting out a little water.

WEST TANKERVILLE.—A. Waters, Sept. 29: The Wood engine-shaft is drained 20 fms. below adit, but there is yet no sign of the level which leads into the big bottoms. Yesterday we lowered the pump another 6 fms., which length will in all probability put us down to the level in question.—California: The lode in bottom of engine-shaft, sinking below upper adit, carries a leader of lead ore about 1 ft. wide; splendid stuff is being raised from this point, and we expect to go on opening a section of profitable ground on the tin lode. The tramway is now complete from California engine-shaft out to the office, enabling us to bring the ore stuff to the daylight. No change on north boundary lode for some time past.—South Boundary: The new shaft is 20 fms. from surface, the ground still being favourable for progress. New engine on the mine, and the boiler to be put into the house to-morrow.

WEST TOLGUS.—Sept. 28: In the 105 west the lode is a little improved, and looking kindly for further improvement; the lode is from 5 to 6 ft. wide, yielding 6 tons of ore per fathom; the ore is not so good as it was, not being so solid, but it is a fine lode. The end is now 13 fms. from the rise. Taylor's shaft has been divided and cased down to the 116, the skip-road down, penthouse in, and everything complete and in good working order from the 105 to the 116. We have not yet set to the shaftmen; there is a hard floor of ground in the bottom of the shaft, which we do not think will continue long. No alteration in any other place.

WEST WHEAL TREMAYNE.—S. Roberts, Sept. 27: We have commenced to drive south on the cross-course in the 20 fm. level, lately cut to reach the main part of the lode, which is in Park Toll shaft; we set it on Saturday last to four men and three boys, at 2*l.* 10*s.* per fathom. The lode in Park Toll shaft is 10 in. wide, yielding good stones of tin; this shaft is now 20 fms. from surface.

WHEAL AGAR.—Edward Rogers, Sept. 28: Friday last being our setting-day, the following bargains were set:—The engine-shaft to sink below the 140 by nine men and three boys, at 40*l.* per fathom; the lode in the shaft is worth 20*l.* per fathom. The 140 to drive east by four men, at 12*l.* per fathom; lode at present small, and of no value. The lode in the 140 west is also small; driving by four men, at 8*l.* 10*s.* per fathom. A stope in back of this level to six men, at 5*l.* 10*s.* per fathom; lode worth 30*l.* per fathom. Also a stope in back of the 140, easton the shaft, to six men, at 5*l.* 10*s.* per fathom, worth 20*l.* per fathom. The 130 to drive east of the shaft by four men, at 10*l.* 10*s.* per fathom; lode worth 12*l.* per fathom. A winze to sink below this level to six men, at 12*l.* per fathom; lode worth 6*l.* per fathom. Also a winze to sink below the 110, east of the engine-shaft, by four men, at 8*l.* 10*s.* per fathom, worth 10*l.* per fathom. The flat-rod shaft to sink below the 170, now down 11½ fms. below the level, to nine men, at 50*l.* per fathom. To cut through the lode at the 170 cross-cut, by six men, at 30*l.* per fathom, where it is now cut into 9 ft., but so far is not rich. And a winze to sink below the 150 by four men, at 4*l.* per fathom, worth 6*l.* per fathom.

WHEAL BULLER.—J. Inch, Sept. 24: Setting Report: Hocking's shaft to sink under the 102 fm. level, by six men and three boys, for the month, at 30*l.* per fathom; the lode in this shaft is large, producing good stones of tin. The 102 fm. level to drive north, by six men, at 3*l.* per fathom; we expect to cut the north lodes in the ensuing month. A rise in the back of this level, by two men, at 2*l.* 10*s.* per fathom; the object of this rise is to ventilate the 102 fm. level. A winze to sink under the 80 fm. level on the cross-course, by two men, at 3*l.* 10*s.* per fathom. The 80 fm. level to drive west on the north lode, by four men, at 14*l.* per fathom; the lode in this end is producing stones of tin. A winze to sink under this level, by four men, at 13*l.* per fathom; the lode at this point is worth for tin and copper ore 12*l.* per fathom. Stevens's shaft is sunk to the 102 fm. level on the south part of the lode; I set to this pare of men to stope down the north part of the lode, at 5*l.* per fathom, where there is good work for tin. I shall be able to report further on its value in the space of another week. We have suspended the sinking of the winze, east of the cross-course, for the time. I have set to this pare of men to drive south 6 ft. at the bottom of this winze, to prove the lode in that direction.

WHEAL CREBOR.—J. Goldsworthy, Sept. 28: In the 117, west of Kelly's shaft, the driving is continued by the side of the lode. In the 120, east of Cock's shaft, the lode is 2 ft. wide, of a promising description, and produces 1 ton of good copper ore per fathom. In the 96 cross-cut, driving south, the stratum is congenial for the production of mineral—good progress is being made. In the rise in back of the 84 the stripping down of the lode is being forced on; the same will produce 4 tons of copper ore per fm. In the end driving west of the rise, in back of the 72, the lode is from 2½ to 3 ft. wide, and produces 2 tons of good copper ore per fathom. The tribute pitches are without change.

WHEAL FRANCO CONSOLS.—Capt. Doidge, Sept. 27: We are now driving east and west from Sutton's shaft; the part of the lode being driven on in the eastern end is at present unproductive. The western end is producing ore of a better quality than I have seen in this part of the mine before. The level in the western part of the mine has been cleared 20 fathoms, and there remains about 10 fathoms more to clear.

WHEAL GRENVILLE.—G. R. Odgers, W. Bennetts, Sept. 24: All the tutwork places in this mine are of the same value as we stated in the report for the general meeting. The tributers are busily engaged sampling their work, which so far as we can at present judge will be equal to our estimate.

— G. R. Odgers, Wm. Bennetts, Sept. 29: We are very busy sampling our tinstone for this month, which we think will be about the same quantity as we before estimated. We have no change to notice underground. We will send you a detailed report with our settings on Saturday.

WHEAL KITTY (St. Agnes).—S. Davey, Wm. Polkinghorne, Sept. 24: New Shaft—Pryor's Lode: In the 118, driving east and west of cross-cut, the lode is much the same as last reported, worth for tin 7*l.* per fathom. In the 106 fm. level, driving west of shaft, the lode is 2½ ft. wide, and worth for tin 18*l.* per fathom. In the 106 fm. level, driving east of shaft, the lode is worth for tin 9*l.* per fathom. In the 94 fm. level, driving west of shaft, the lode is 4 ft. wide, and worth for tin 12*l.* per fathom. In the 94 fm. level, driving east of shaft, the lode is worth for tin 4*l.* per fathom. In the winze sinking below the 94 fathom level, east of shaft, the lode has not been taken up during the week. In the 82 fathom level, driving west of shaft, the lode is worth for tin 7*l.* per fathom. In the winze sinking below the 82 fm. level, west of shaft, the lode is 3 ft. wide, and worth for tin 11*l.* per fathom.—Old Lode: In the 82 fm. level, driving west of Holgate's shaft, the lode is producing saving work for tin.

WHEAL RUSSELL.—J. Bray, Sept. 29: The lode in the adit shaft is 5 feet wide, worth for copper ore 30*l.* per fathom. The main part of the lode in the rise above the back of the adit level has not been taken down since last report. The lode in the stope east of the rise is worth 30*l.* per fathom. No improvement in the lode in the adit level. We shall sample to-morrow 120 tons.

WHEAL TRELAWNY.—W. Johns, T. Grenfell, Jno. Pryor: The ground in the 200, north of Chippendale's, is still favourable for driving. A pare of men are engaged in taking down the lode, which is worth 12*l.* per fathom. In the 222, north of Smith's, the lode is about 4 ft. wide, but not rich. In the 210, south of Smith's, we are about under the 210 north from Trelawny's, and have to-day set a rise to communicate; this no doubt will open up a profitable piece of ore ground. The pitch in back of the 40, south of Trelawny's, is looking pretty well, worth from 8*l.* to 10*l.* per fathom. We have cut ground for cistern-plat in Trelawny's shaft below the 230, and shall sink about 9 ft. more before altering the pitwork. We shall sample on Tuesday next two parcels of silver-lead ore, about 84 tons.

WHEAL UNY.—W. Rich, M. Rogers, S. Coade, jun., Sept. 24: The lode in the 166 west, at the bottom of the mine, is worth 10*l.* per fathom. The 150 west is worth 8*l.* per fathom. We have resumed the driving of the 150 east on the course of the lode. The rise in the back of the 140 is worth 12*l.* per fathom. The 130 fathom level end east is worth 12*l.* per fathom. The rise in the back of the 120 fathom level is worth 15*l.* per fathom. The ground is much easier in the 110 fm. level end east; the lode is worth 12*l.* per fathom. The 60 east is worth 15*l.* per fathom. The 45 is worth 18*l.* per fathom. The 35 east is worth 15*l.* per fathom.

WHEAL SPARNON.—Sept. 24: There is no change in the north lode in the adit driving east; still producing stones of tin in the gossan.

splendid profits in working; and, besides this, there is an immense quantity of rich tinstuff at surface, that can be put into the stamps at about 6d. per ton, and which is worth at least from 5s. to 6s. per ton. From this alone the agent states he will make splendid profits. The Roche and St. Austell district has been noted for its richness. One mine in the district returned upwards of 3,000,000*l.* of tin, and gave fabulous profits, whilst another in one year gave upwards of 80,000*l.* net profits to its fortunate shareholders.

THE PROFITS OF BRITISH MINES.—The dividends paid during the past month to shareholders in British mines has again been highly satisfactory, amounting to considerably over 31,000*l.* In several cases the distribution has been made out of the profits of two months' workings, and in some out of three months' profits. The aggregate capital invested in the mines upon which the dividends were paid amounts to less than 210,000*l.*, showing the dividends per cent. per annum to be really enormous. This position of affairs is the more gratifying, because, with the exception of lead, the metal market has been rather adversely affected by the war; yet, upon analysing the payments made, it is found that, although the lead mines gave upwards of 17,000*l.* dividends in the month, the tin and copper mines are not far behind them, figuring for upwards of 14,000*l.* in the same time. These facts must be as encouraging to all engaged in mining enterprise as they are satisfactory to holders in the particular mines.

MINING IN INDIA.—The manager of the Kooloo Mines, in replying to a correspondent of the *Indian Public Opinion*, who had asserted that these mines could not export copper or antimony at a profit, because they are 200 miles from a railway, says:—"He evidently knows nothing about it, but like so many in India, pooh poohs every adventure. It so happens, however, that the entire cost of raising antimony, preparing it for market, and the carriage and freight to London, including the smelter's commission, does not amount to 35*l.* per ton delivered, and sells for 75*l.* or 80*l.*, leaving a clear profit of 40*l.* or 45*l*, for the shareholders and—MANAGER."

Vice-Chancellor Bacon has appointed Mr. Frederick Whinney (Harding, Whinney, Gibbons, and Co.) provisional official liquidator of the Trouville Association (Limited).

₊ With this week's Journal a SUPPLEMENTAL SHEET is given, which contains: Papers Read at the Meetings of the British Association—Gold in Wales, and On Known Associates of Inorganic Substances (T. A. Readwin); On Improved Appliances for the Production of Heavy Forgings (Lieut.-Col. Clay); Coal Fields of England (Prof. Hull); New Colliery Lamp—Foreign Mining and Metallurgy—Foreign Mines Report—Original Correspondence: Tees Side Iron Works; Zinc, and its Manufacture; Steam-Boiler Explosions; United States Patent Law Reform (Hughes and Son); Products of Mining represented at the Russian Industrial Exhibition at St. Petersburg, No.1.(J. Rushforth); Mining Machinery—Transfer of Power, No. 111 (Illustrated); Rating of Mines; Truck System; Relative Market Value of Progressive Mines; Mining in Montgomeryshire (S. Trevethan), &c.

The Mining Market; Prices of Metals, Ores, &c.

METAL MARKET—LONDON, SEPT. 30, 1870.

COPPER.	£ s. d. £ s. d.
Best selected ..p. ton	71 0 0– —
Tough cake and tile	69 0 0– 70 0 0
Sheathing & sheets..	72 0 0– —
Bolts	75 0 0– —
Bottoms	75 0 0– 76 0 0
Old	63 0 0– —
Burra Burra	70 0 0– —
Wire.........per lb.	0 0 10– —
Tubes	0 0 11– —
BRASS.	Per lb.
Sheets	8¼d.– —
Wire	7¼d.– —
Tubes	10d.–11½d.
Yellow Metal Sheath	6½d.–7d.
Sheets	6¼d.– —
SPELTER.	Per ton.
Foreign on the spot	£17 10 0– —
„ to arrive ..	None.
ZINC.	
In sheets	£24 0 0– —
QUICKSILVER (p. bottle)	8 8 0
TIN.	
English blocks ..	£124 10 0–125 0 0
Do., bars (in brls.)	125 0 0– —
Do., refined	128 0 0– —
Banca	126 0 0– —
Straits	124 0 0– —
TIN-PLATES.*	Per box.
IC Charcoal, 1st qua.	1 5 0– 1 8 0
IX Ditto, 1st quality	1 11 0– 1 13 6
IC Ditto, 2d quality..	1 6 6– —
IX Ditto, 2d quality..	1 12 6– —
IC Coke	1 2 6– 1 3 6
IX Ditto	1 8 6– 1 9 6
Canada plates, p. ton..	13 10 0–14 10 0
Ditto, at works	13 0 0–14 0 0

IRON.	Per ton.
Bars Welsh, in London	7 5 0– —
Ditto, to arrive	7 5 0– —
Nail rods	7 10 0– —
„ Staffd. in London	7 15 0– 8 0 0
Bars „ ditto	8 2 6– 9 0 0
Hoops „ ditto	8 15 0– 9 0 0
Bars „ at works..	7 15 0– 8 0 0
Hoops „ ditto	8 2 6– 8 5 0
Sheets, single	9 10 0–11 0 0
Pig No. 1, in Wales ..	3 15 0– 4 5 0
Refined metal, ditto..	4 0 0– 5 0 0
Bars, common ditto..	6 15 0– —
Do. mrch. Tyne or Tees	6 10 0– —
Do., railway, in Wales	7 0 0– 7 5 0
Do., Swed. in London.	9 15 0– 9 17 6
To arrive	9 15 0– —
Pig, No. 1, in Clyde ..	2 12 0– 3 0 0
Do. f.o.b. Tyne or Tees	2 9 6– —
Do. Nos. 3,4, f.o.b. do.	2 6 6– 2 7 0
Railway chairs	5 17 0– 6 0 0
„ spikes	11 0 0–12 0 0
Indian Charcoal Pigs, in London, p. ton..	6 5 0– 6 10 0
STEEL.	Per ton.
Swed., in kegs (rolled)..	13 10 0–13 15 0
„ (hammered)..	14 5 0–14 10 0
Ditto, in faggots	15 10 0– —
English, spring	17 0 0–23 0 0
LEAD.	Per ton.
English Pig, com.	18 0 0–19 10 0
Ditto, LB	18 2 6–18 5 0
Ditto, WB	19 0 0–19 10 0
Ditto, sheet	20 10 0–21 0 0
Ditto, red lead	21 10 0– —
Ditto, white	28 0 0–30 0 0
Ditto, patent shot	22 0 0– —
Spanish	18 0 0– —

* At the works, 1s. to 1s 6d. per box less.

REMARKS.—It is futile to expect any decisive change in the position of the Metal Market until some marked alteration takes place in continental affairs. So long as the cry remains "War to the knife!" "War to the bitter end!" and that upon a scale and magnitude unknown in the annals of the past, it would be remarkable indeed if co-existent with this state of things the arts of peace should be found in a flourishing condition. Unlooked-for complications arise day by day, which are of such a complexion as totally to alter opinions previously formed, and to cause the wary to pause ere committing themselves to a course of action which the events of to-morrow may show to be fraught with loss. But it is impossible that this state of things can last for ever. The war *must* terminate sooner or later, and as in the meantime consumption is continually going on, a time must come when orders now withheld, or put on one side and forgotten, will be brought forward for execution, and the ever-growing requirements of the world will demand fresh supplies. Until that time comes it is, we are of opinion, much wiser to husband resources than to continue shipments which may promise well at the moment, but which in the end may prove unsatisfactory.

COPPER.—The feeling in this market tends to weakness. We hear of little or no business of any importance. Chili bars are quoted at 62*l.* to 63*l.*, being 1*l.* below our last week's prices, and there appears to be no demand at this reduction; ore and regulus, 12s. 3d. The smelters may think that they have exercised patience long enough, and that the time has come for some decisive action; and so it has, only let the course of the action be in the direction which shall result in the benefit of the trade, and not in yet greater loss to the operator individually, and damage to the trade generally. If it were possible to yet further contract the make within narrower limits, this would be taking action in the right direction, but to consign copper, or to sell it by granting unusual facilities, is taking action in a direction which tends to prolong the unhealthy condition of the market, to damage the trade generally, and to do no good to the consigner or seller.

YELLOW METAL.—There is a little more doing, but orders are usually at such limits as to be prohibitory. Sheathing is still quoted at prices which are considered to be proportionably too high when contrasted with the price asked for sheets.

IRON.—The reports from South Staffordshire are not encouraging. The flow of orders on a large scale, or for export, has all but ceased during the progress of the war; and were it not that a large proportion of the home orders find their way to this district, trade would be very dull. As it is, however, there is fair activity in some branches for articles of home consumption; and if only the wages question, which is again cropping up, can be satisfactorily disposed of, the dull time may not prove so serious as it might otherwise be. The men originally demanded 1s. per ton advance in wages, but this demand they ultimately reduced to 6d., acknowledging that the masters were unable to comply with the former demand. This proposition of the men has been under consideration, and it was finally resolved at a meeting of the Ironmasters' Association, held in Birmingham, on Thursday last, that the action already taken by the committee in refusing for the present to make any advance in wages should be confirmed. It is our desire to look on as neutrals, but it seems to us the men have chosen an unhappy moment in which to agitate for any advance. It has come to a question not of what the men are entitled, or think themselves entitled, to ask, but what the masters can afford to give, and he is acting with very short-sighted policy who, really comprehending the position in which the masters are, rejects the large moiety of the loaf offered him, because he considers himself entitled to a whole loaf. The masters are, we believe, not disinclined to grant the reasonable requests of the men, but there is a limit to the power of the most indulgent masters to meet the demands of their men. From Wales we receive more encouraging reports, but they are based rather upon the better feeling which was induced some days ago by prospects of peace than from any influx or orders or increase of business. Makers, in the expectation of a speedy settlement of the war question, pushed on various orders in hand to a rapid completion, hoping that fresh contracts for the coming quarter would take the place of those being worked off. The Russian orders and those for America are being cleared off as rapidly as possible. There is a good home trade doing in various descriptions, but export business is at a low ebb. Scotch pigs are, perhaps, more immediately sensitive to the disturbing causes which are abroad than any other description of iron. We quoted them last week as firm at 51s. 9d., with business done. They went up still higher in the early part of this week, and the price stiffened to 52s. cash, at which a fair amount of business was concluded; all of which, however, was based upon the prospects of peace, and as those prospects melted away the price of pigs receded to 51s. 2d. cash, and 51s. 6d. one month. Swedish bars remain unchanged. Prices are firmly upheld, but little or nothing doing.

LEAD.—The very low prices at which this metal is quoted are beginning to attract attention, and some business in the higher qualities of pigs has been transacted during the week.

SPELTER.—Market very dull. Silesian is quoted at 17*l.* 10s., but there is no business reported. Hard spelter is offered at 14*l.* 5s.

TIN.—Straits still commands a sale in small lots, at 124*l.*, and English is quoted at 124*l*, to 125*l*, The position of this metal will be more clearly defined after the Dutch sale, advertised for Oct. 7, has taken place.

TIN-PLATES.—No change to report since last week.

THE IRON TRADE—(Griffiths' Weekly Report).—The uncertain state of the politics of Europe leave the iron trade in precisely the same condition, and if we look to the future-forebodings they are far from being satisfactory. There is no change declared in the price of iron for the next quarter, but the interruption to the trade caused by the invasion of France is felt in every department of the trade, and until we perceive a more certain prospect of peace we cannot take a more favourable view of the future. The attitude recently assumed by Russia in preparing for war has created considerable alarm to Europe. Austria afraid to move—Italy in the same position—our own Government looking on, perhaps wisely, all things considered—while France is being humiliated, crushed, and ruined, presents a pitiable political combination never before witnessed in the modern annals of Europe; and if the next aggressive campaign is to commence in the Black Sea, and extend with easy victories to the Sea of Marmora, and thence to the Mediterranean, this means war for England, which would be a very different suffering for us to our present position of merely watching the invasion and crushing of our gallant neighbours by the Prussians, who are just on the eve of bombarding the beautiful city of Paris. There is an order on the market for 40,000 tons of steel rails for Canada, and we should be glad to receive communication from Middlesborough and Welsh houses for the same. The market for tin-plates is quiet.—75, Old Broad-street, London, Oct. 1.

THE COPPER TRADE.—Messrs. James and Shakspeare—Nothing has transpired in furnace materials, but importers seem willing to make a concession of 3d. per unit on the price lately obtained by them for regulus. We have to note a reduction of about 20s. per ton in Chili bars, but there is no disposition to purchase anything except in small quantities, and to supply pressing wants. Australian is in moderate demand at the figures given in our list, and sales have been made thereat for exportation to Germany and the North of Europe. In English there is very little doing, and nearly all descriptions can be obtained at a reduction of about 20s. per ton from the official rates.

CHEMICALS AND MINERALS.—(Messrs. J. Berger Spence and Co., Manchester, Sept. 30).—Soda: Cream caustic in improved demand, and firm at 12*l.* 10s. for 60 per cent.; and white at 13*l.* 5s. to 13*l.* 10s. Soda crystals active, at 4*l.* 2s. 6d. to 4*l.* 5s. Soda ash firm, at 1 11-16d. to 1¾d. per degree. Bi-carbonate dull, at 9*l.* 10s. to 9*l.* 15s. for refined. Saltcake, 3*l.* Sulphate of soda, 3*l.*—Nitrate of Soda: Slightly declined in value, and sales effected at 14*l.* to 14*l.* 10s.—Potash: Muriates are now being offered at 9*l.* to 9*l.* 10s, for 80 per cent. f.o.b., subject, of course, to blockade conditions. Prussiate, yellow, 11½d.; red, 1s. 8½d. to 1s. 9d.; Prussian blue, 1s. 6d. to 2s.—Saltpetre: A little easier, but with few sales. Foreign, 29s. to 32s.; refined, at 34s.—Alum active: Loose lump at 6*l.* 5s. to 7*l.* in export barrels; ground, at 7*l.*—Ammonia: Brown sulphate in extensive demand at 13*l.* 5s. to 13*l.* 15s. White and grey rather better to sell, at 15*l.* to 16*l.*—Copperas: Dry, as usual, at 52s. Green and rusty unchanged, at 50s. to 54s.—Arsenic: At 6*l.* 15s. to 7*l.* 5s. for fine powdered.—Acid: Tartaric maintains its firmness of tone, and is in good demand at 1s. 3½d. to 1s. 4d.; oxalic, at 7¾d. to 8d.; sulphuric, at 3*l.* 5s. to 3*l.* 10s.—Magnesia: Epsom salts at 4*l.* 10s. to 4*l.* 15s. for refined.—Oils: Olive quieter than usual, at 48*l.* to 50*l.* Lubricating oils in fair request, at from 2s. to 5s. per gallon. Pure white Norwegian cod liver oil at 9*l.* 10s. per barrel.—Pitch: No transactions scarcely, especially for abroad, which keeps down prices.—Benzole: No change to notice, 30 per cent. at 2s. to 2s. 4d.—Disinfectants: Patent, at 5*l.* per ton for corporations; carbolic, at 10*l.*—China-clay: 22s. per ton.—Pyrites: There are signs of increasing firmness, and another advance on last year's prices. Calcined, at 42s. to 43s. R.C.—Lime: Bleaching powder, at 8s. 5s. to 8*l.* 10s. Super-phosphates firm, at 4*l.* 5s. to 4*l.* 10s. Mineral phosphates, 56s. to 60s. for 65 per cent. —Manganese: Dull, and prices vary from 70s to 80s. for 80 per cent.—Iron Ore in good enquiry. Hematite at 13s. Oolitic, at 6s. 9d. to 8s. 6d. in Staffordshire, and 2s. 9d. free on rails.

The MINING SHARE MARKET has been dull this week, with very little alteration in prices, though the tendency has been downwards. The fortnightly settlement, which took place on Friday, was also of very limited amount. Business has been chiefly confined to West Chiverton, Taquaril, Great Laxey, Great Wheal Vor, West Frances, East Lovell, Great Retallack, Seton, Tankerville, Chiverton Moor, Drake Walls, and a few other mines.

Great Laxey, 17½ to 18; the accounts for six months, to be presented to the annual general meeting, at Douglas, on Oct. 12, show lead ores sold, 22,505*l.* 15s.; blende, 9513*l.* 6s. 6d.; copper ores, 137*l.* 10s.: less credit last account, 4586*l.*; making present credit sales, 28,806*l.* 19s. 6d. Stock in hand, 3225*l.* 13s. 6d. The labour cost for six months, from February to July, amounts to 15,301*l.* 14s. Merchants' bills, 3248*l.* 3s. 1d.; royalty paid to the Crown, 1969*l.*; dividends paid to shareholders, 15,000*l.*—March 29, the 25th dividend, 10s. per share, 7500*l.*; June 29, the 26th dividend, also of 10s. per share, 7500*l.* Balance in hand, including balance of last meeting and reserve capital account, 11,620*l.* 11s. The statement of assets and liabilities shows also the like balance of assets, 11,620*l.* 11s. Owing to the long-continued drought, some of the best ore ground in the bottom levels of the mine has not been worked, and the agents have also been unable to draw, crush, and dress large quantities of ores lying above and below ground, calculated on Aug. 5 at 100 tons of lead, worth 2200*l.*; 500 tons of blende, 1762*l.*—total, 3964*l.*; and which would have made the assets over liabilities 15,584*l.* 11s. For this reason the dividend declared on the 15th for the last quarter was only 8s. per share.

Great Retallack, 20s. to 25s.; some years ago the yield of blende from this mine was as much as 500 tons per month, but the price at that time (25s. per ton) did not pay expenses, and the works on the big lode were suspended in 1863, and the engine removed to work the lead lode, now being prosecuted. It was always the opinion, however, of the different agents who inspected it that a large deposit of lead or copper would be found under the blende, and for some months past a cross-cut has been in course of driving to cut the blende 70 to 80 fms. from the old workings, which will drain them to a good depth, and give 45 fms. of backs to work upon, now that blende is in demand at 3*l.* per ton, to prove this in very favourable ground, to see as soon as possible what is under the blende, and to further test the lead lode, which in some places has yielded as much as 2 tons of silver-lead ore per fathom, as the three main points of the mineral present.

East Lovell shares have been firmer, and leave off 31 to 32. The report is more favourable; 4 tons of tin per week are being dressed, and more could be raised and returned but for the short supply of water. Marke Valley, 6¾ to 7¼; the ends on Rose Down lode are producing 10 tons of copper ore per fathom.

Great Wheal Vor, 5½ to 6; at the meeting the accounts showed a balance in favour of the mine of 2146*l.* 10s., but no dividend was declared. The agents stated that, although the returns of tin for the quarter had fallen short of the estimate, the prospects had much improved during the past month. Chiverton Moor, 3½ to 4; the mine is said to have improved in the 95. Chiverton Valley, 2½ to 3; Ding Dong, 17 to 20; Drake Walls, 20s. to 22s. 6d.; Dolcoath, 125 to 130; East Caradon, 4 to 4½; East Pool, 8 to 8½; East Wheal Grenville, 2¼ to 2½. Gwydyr Park, 13s. to 15s.; this mine has now got into regular working, and good sales of lead are expected. Herodsfoot, 44 to 46; Nangiles, 1¼ to 1½; New Lovell, 1¾ to 2. Prince of Wales, 11s. to 13s.; the lode in the 77 east is worth 10*l.* per fathom. Providence Mines, 37 to 39; at the meeting a dividend of 1*l.* per share was declared. Rosewall Hill and Ransom United, 20s. to 22s. 6d.; South Condurrow, 2 to 2¼; South Frances, 27½ to 30; Spearne Moor, 18 to 20; Tankerville, 14 to 15; Tincroft, 34 to 36; Trumpet Consols, 23 to 25; Van, 57½ to 62½; Van Consols, 2 to 2¼; West Chiverton, 53 to 54; West Frances, 28 to 30; West Panty-y-Go, ¾ to 1; West Seton, 120 to 125; Wheal Crebor, ½ to ¾; Wheal Jane, 52½ to 55; Wheal Kitty (St. Agnes), 6¾ to 7¼; Wheal Seton, 37½ to 42½; Australian United, 20s. to 25s.

Frontino and Bolivia, 10s. to 15s.; the produce for the month of July was 456 ozs. of gold (1134*l.* 17s. 1d.), which left a loss on the month of 696*l.* 8s. 9d. Don Pedro del Rey, 3 to 3¼; the produce weighed to date of advice (August 29) was 6039 oits.; estimate for month, 7539 oits. Taquaril, 36s. to 38s.; the advices state that the works connected with the stamping-mill, &c., are progressing with good dispatch, but there is very little change in the mine. St. John del Rey shares have advanced to 22, 24; the return of gold for the second division of August is the best for some time—4172 oitavas. Chontales, 10s. to 15s.; Pacific, 2¼ to 2¾.

The market for Mine Shares on the Stock Exchange during the week has been very quiet in character, and fluctuations in prices have been quite unimportant. The demand for Taquaril, Van, and Don Pedro shares continues; and Sweetland Creek, on the advices by cable, from the company's manager, that the clean-up gave 1700*l.* profit for 53 days, and forwarding a remittance of 1600*l.*, slightly improved in price, closing 2¾ to 3¼: a dividend of 4s. may be looked for in the course of about a fortnight. Van, 59 to 61; the reports from the mine are of the most assuring character; the 45 fm. level is an almost solid course of ore, worth 15 tons per cubic fathom; the 30, driving west, is equally rich; and the 15, 50 fms. west, is a splen-

old course of ore; beyond this end, in the 15, the ground is standing whole; while 70 fms. west and 90 fms. west it has proved rich; and in the extreme end, 128 fms. west, driving in the soft, there is good lead. The great feature is the discovery, 56 fms. east, in the 15 fm. level. The reserves may be valued at about 2,000,000*l.* sterling. Tin mines have been in slightly better demand; the features otherwise have been unimportant. Subjoined are the closing quotations:—Assheton, 5½ to 5¾; Tan-yr-Allt, 2¾ to 3¼; Van Consols, 2 to 2¼; Cae Gynon, 1¼ to 1⅜; Tankerville, 14 to 14½; Laxey, 17⅛ to 18; Vor, 5⅝ to 6; Tincroft, 35¼ to 36¼; East Caradon, 4¼ to 4⅜; East Lovell, 31½ to 32½; Marke Valley, 6¾ to 7¼; Devon Consols, 70 to 80; West Chiverton, 53 to 53½; Wheal Seton, 40 to 45; Almada, ⅞ to 1⅛; Anglo-Argentine, ⅝ to ¾; Pestarena, ⅛ to ⅜; General Brazilian, ⅛ dis. to par; Don Pedro, 2⅜ to 2⅝ prem.; St. John del Rey, 21½ to 22⅝; Taquaril, 22s. to 23s. prem.; Pacific, 2⅛ to 2⅜; Sweetland Creek, 2⅞ to 3⅛; United Mexican, 2 to 3; Yudanamutana, 1 to 1¼.

IRISH MINE SHARE MARKET.—The general share market was comparatively inactive, the fall of Strasburg, which was expected for some days past, giving hopes to our dealers that the French nation would soon see the uselessness of prolonging their resistance to the demands of the Germans, and that a peace being arranged we should experience violent fluctuations, rendering it hazardous to enter into any extensive time bargains. Mining shares were for the most part neglected. Wicklow Copper shares are on sale at last price of 8*l.* (2*l.* 10s. paid); also Mining Company of Ireland shares (7*l.* paid) are on offer at 8*l.* 2s. 6d.; Connorrees are low enough to be steady at 3s. 6d., at which price business has been done. Killaloe Slate Quarry shares have been disposed of at 15s., or a fall of 2s. 6d. Cape Coppers have receded a further 15s., being quoted at 15*l.*, but leaving off firm. In about a month or six weeks a seven-wired cable will be laid between Howth and Holyhead, which, with the four wires just laid between Fort Patrick and Donaghadee, and the older cables, will give a total of twenty-two wires between this country and Great Britain.

The following dividends were declared during September:—

Mines.	Per share.	Amount.
Tincroft	£1 10 0	£9000 0 0
Van	0 15 0	9000 0 0
Great Laxey	0 8 0	6000 0 0
South Caradon	4 0 0	2048 0 0
East Pool	0 4 0	1280 0 0
Providence	1 0 0	1120 0 0
Cashwell	0 3 6	1120 0 0
Queen	0 1 0	750 0 0
Wheal Mary Ann	0 10 0	512 0 0
Total		£30,830 0 0

The dividends for the first eight months of the year amount to 313,662*l.* 13s. 6d., so that with the addition of the 30,830*l.* shown above, the total to the end of September is raised to 344,492*l.* 13s. 6d.

At South Caradon Mine meeting, on Tuesday, the accounts for May and June showed a profit of 2063*l.* A dividend of 2048*l.* (4*l.* per share) was declared, and 3045*l.* carried to the credit of next account. It was resolved "That in consequence of the continued depression of the copper market, the great outlay that has been required in the purchase of new machinery recently erected on the mine, and inasmuch as the lessors' interest is identical with that of the adventurers, the lessees be requested to wait on the lords to solicit a reduction in the dues." [The agents' report is among the Mining Correspondence.]

At the Providence Mines meeting, on Wednesday, the accounts for the quarter ending July showed a profit of 1072*l.* 19s. 7d. A dividend of 1120*l.* (1*l.* per share) was declared, and 302*l.* 4s. 6d. carried forward. Capts. W. Hollow, P. Rogers, and B. Martin say—"In the past three months we have not returned the usual quantity of tin, but from present appearances we hope to raise more in the ensuing quarter."

At the Great Wheal Vor United Mines meeting, on Wednesday (Mr. G. Noakes, F.G.S., in the chair), the accounts showed a credit balance of 2146*l.* 9s. 11d., which was carried forward to the next account. Details in another column.

At the Llanarmon Lead Mine meeting, on Thursday (Mr. Wm. Carpenter in the chair), the report and accounts were received and adopted. It will be seen by the details, which appear in another column that the development of the mine is progressing in a satisfactory manner, and that early success is anticipated.

At West Basset Mine meeting, on Wednesday, the accounts showed a balance of assets over liabilities (exclusive of 936*l.* arrears of calls) of 1231*l.* 8s. 3d. A call of 5s. per share was made to liquidate the law cost, amounting to 800*l.*, in connection with the boundary question. The two months' working showed a profit of about 200*l.*

At the Great South Tolgus quarterly meeting, on Sept. 23, the accounts showed a loss of 550*l.*; arrears of calls, 702*l.* 10s. On the report of Capt. Rodda that the mine could not be worked at less than 150*l.* per month loss, it was resolved that Capts. William Rowe (of Wheal Seton) and Charles Thomas (of Cook's Kitchen) be requested to inspect the mine, and to report to the adjourned meeting, to be held on Oct. 12.

At Trevarrack Mining Company meeting, on Sept. 23, the accounts showed a debit balance of 760*l.* 16s. 6d. A call of 10s. per share was made. Capt. James Pope, late of Basset, is appointed manager, and, with Capt. Truren, reports very favourably on the mine and its prospects. Mr. George Still writes—"The appearance of the works is most gratifying, and they are being pushed forward with all possible dispatch." The statement altogether is favourable.

At the Wheal Emily Henrietta meeting, on Monday, the accounts showed a debit balance of 550*l.* 16s. 3d. Capt. S. G. Truran has been appointed manager and resident agent, at a salary of 9*l.* 9s. per month. A 30-in. rotary-engine is to be erected on Carlyon's shaft. A call of 15s. per share was made.

At North Pool Mine meeting, on Sept. 23, the accounts showed a debit balance of 1152*l.*, including all costs charged to August. To pay off liabilities the further issue of 2315 shares was authorised, increasing the number of shares at present constituting the company to 5000.

The English and Australian Copper Company (Limited) have called an extraordinary meeting for Oct. 6, when a resolution will be proposed authorising the directors to borrow upon mortgage or debentures the sum of 30,000*l.*

The Carreg Fawr Slate and Mineral Company (Limited) will hold an extraordinary meeting on Oct. 11, when a resolution will be proposed in favour of the transfer by the liquidator of the company's estate in Carnarvon to the Provincial Insurance Company, in satisfaction of their claim.

COAL MARKET.—The fresh arrivals this week only number 66 ships. The demand for house coals has been more active, and in second-class sorts rather higher prices have resulted. Hetton Wallsend, 19s.; Lambton Wallsend, 18s. 6d.; Hartlepool Wallsend, 18s.; Elliot's Wallsend, 18s.; Kelloe Wallsend, 17s. 6d.; Eden Main, 16s. 6d. Unsold, *nil*; 40 ships at sea.

The Bank of England return for the week ending on Wednesday evening showed in the ISSUE DEPARTMENT an increase in the "notes issued" of 631,415*l.*, which is represented by a corresponding increase in the "coin and bullion" on the other side of the account. In the BANKING DEPARTMENT there was shown an increase in the "public deposits" of 61,525*l.*; in the "seven day and other bills" of 22,984*l.*; and in the "rest" of 3831*l.*: together, 88,340*l.*; and a decrease in the "other deposits" of 68,453*l.* = 19,887*l.*, and adding this to 363,089*l.*, the decrease in the "other securities" on the asset side of the account, there is shown a total increase in the reserve of 382,976*l.*

OPEN STOCK EXCHANGE.—Quotations of the Sale on Sept. 27:—
Anglo-Argentine Company (Lim.), 15 per ct. Preference, 8s. paid, 4s. 3d.
Choutales Gold and Silver Mining Co. (Lim.), fully paid, 14s. 3d. to 14s. 9d.
Don Pedro North del Rey Gold Mining Company (Limited), 14s. paid, 3*l.* 1s.
Eclipse Gold Mining Company (Limited), 15s. paid, 12s. to 13s. 2d.
General Brazilian Mining Company (Lim.), 16s. pd., 14s. 3d. to 14s. 6d.
Great Caradon Copper Mine, St. Ive (Cost-book), all calls paid, 10s.
Port Phillip and Colonial Gold Mining Company (Lim.), 20s. paid, 18s. 3d.
Princess of Wales Mine (Cost-book), all calls paid, 4d.
Rossa Grande Gold Mining Company (Limited), 14s. paid, 3s. 1d. to 3s. 6d.
Sweetland Creek Gold Mining Company (Limited), fully paid, 2*l.* 17s. 6d.
Taquaril Gold Mining Company (Limited), 13s. paid, 1*l.* 13s. 9d. to 1*l.* 14s. 6d.
Yudanamutana Copper Mine of South Australia (Limited), fully paid, 1*l.*
The following are the quotations of the Sale yesterday:—
Braganza Gold Mining Company (Limited), fully paid, 11s.
Chontales Gold and Silver Mining Company (Limited), fully paid, 12s.
Cuiba Gold Mining Company (Limited), fully paid, 22s.
Eclipse Gold Mining Company (Limited), 15s. paid, 11s. 6d. to 12s. 6d.
General Brazilian Mining Company (Limited), 12s. 6d. to 13s. 6d.
Port Phillip and Colonial Gold Mining Company (Limited), £1 paid, 16s. 6d.
Sao Vicente Mining Company (Limited), fully paid, 5s.
Taquaril Gold Mining Company (Limited), 12s. paid, 34s. 3d. to 34s. 6d.

CORNISH MINE SHARE MARKET.—There has been nothing particularly new since our last, but, although business is by no means lively, a moderate number of transactions have been effected apparently without difficulty, and the quotations generally are, at any rate, not at present less firm than last week. The metal market, too, has been in a similar position during the week—only moderately active, but tolerably firm. The neighbouring mines to West Chiverton are still working on in hope, seeing the great success of their rich neighbour. Chiverton Moor will sample about 80 tons of lead ore on Oct. 4. The 85 fm. level looks well, and the general prospects of the mines are reported by the agent to be improved. At the old mine of the district, Wheal Chiverton, things are looking much the same, and the shares are low. At Chiverton Valley the stopes are looking much better, and there is a very promising lode in the 85 east. Tregoning's engine-shaft is sinking in a splendid channel of ground, now 59 fms. from surface. At Mineral Bottom they are continuing the cross-cut to intersect the new lode, and hope to get good results. In the 35 south the end is now getting near the run of lead ground seen in the level above.—*West Briton.*

LONDON GENERAL OMNIBUS COMPANY.—The traffic receipts for the week ending September 25 was 10,378*l.* 2s. 7d.

LEAD ORES.

Date.	Mines.	Tons.	Price per ton.	Purchasers.
Sept. 22	Nanteos Consols	25	£11 5 6	Burry Port Company.
23	Great Laxey	50	21 10 6	Weston & Collingborn
—	ditto	50	21 10 6	Burry Port Company.
—	Ballacorkish	30	12 13 0	Walker, Parker, & Co.
—	ditto	3¼	10 5 0	ditto
—	Rhoswyddol	13	10 2 6	ditto
26	Foxdale	100	23 2 6	Sheldon, Bush, & Co.
28	Green Hurth	12	12 2 6	Locke, Blackett, & Co.
29	Trewetha	43	22 15 6	Treffry's Estate.
—	Van	100	12 16 6	Adam Eyton.
—	ditto	250	12 15 0	Mining Co. of Ireland.
—	ditto	50	12 19 0	Burry Port Company.

BLENDE.

Date.	Mines.	Tons.	Price per ton.	Purchasers.
Sept. 29	Van	100	£ 8 1 0	Richardson and Co.

BLACK TIN.

Date.	Mine.	Tons c. q. lb.	Price p. ton.	Amount.	Purchasers.
Sept. 21	Pedn-an-drea	14 2 0 10	£ —	£1061 0 1	Bissoe.
22	Blue Hills	1 0 1 18	71 5 0	72 14 3	Daubuz.
—	ditto	4 1 3 11	71 5 0	291 11 8	—
24	Rosewall Hill	5 19 0 27	73 15 0	439 14 0	—
27	Great Wh. Vor	18 2 1 4	—	1347 19 7	—

WEST JEWELL sale of tributers' tin on Sept. 29 realised 359*l.* 19s. 6d.

COPPER ORES.

NO SALE on Thursday last, September 29.
Copper ores for sale at Tabb's Hotel, Redruth, on Thursday next—Mines and Parcels.—West Wheal Tolgus 483—West Wheal Seton 400—Carn Brea 339—Wheal Seton 334—Crenver and Wheal Abraham 298—North Treskerby 269—South Wheal Crofty 241—Wheal Basset 169—East Pool 119—Clifford 108—Carn Camborne 100—New Pembroke 98—East Carn Brea 80—North Crofty 76—Emily Henrietta 31—East Basset 22—Dolcoath 20—West Tremayne 18—Pennance 15—Cargoll 12—Great North Downs 9—Tremeillan's Ore 2.—Total, 2243 tons.
NO SALE on Thursday week, October 13.

Notices to Correspondents.

*** Much inconvenience having arisen in consequence of several of the Numbers during the past year being out of print, we recommend that the Journal should be *filed* on receipt: it then forms an accumulating useful work of reference.

Sir,—If mineral such as "Landlord" speaks of in the "Notices to Correspondents," in the Journal of Sept. 17, has been discovered in large quantities upon his estate it will pay to work, and leave a good profit, but to what amount no person can state without first examining all the circumstances. If "Landlord" will send to me an average sample—say, ½ cwt.—I should have great pleasure in receiving it, and would then be able to say more about it. I know a mine, which only yields 5 per cent. of lead and 17 ozs. of silver to the ton, which has paid in the last thirty years 250,000*l.* profit. If "Landlord" will communicate with me I am in a position to give him all the information he wants.—C. Dodsworth, Mining Engineer: *Haydon Bridge, by Carlisle.*

Van Consols.—Can any reader inform me what is the relative depth of the above mine in comparison with the Van; also what are the returns and expenses of Van Consols, and cash value of different points of operation?—G. H. B.

Feed-Wafer Apparatus.—Can any of your readers inform me whether the feeding of a steam-boiler by putting the interior of the boiler in direct communication with the water-cistern has ever been tried, and whether it failed or succeeded? What I propose is to put in an iron or brass pipe from the crown of the boiler to terminate exactly at the high-water level on the outside. I would continue this pipe (which should be of ¼-in. bore throughout) to some distance, and there connect it with the feed-water cistern, which, instead of being open, as usual, should be carefully closed air-tight. Now, I believe that with such an arrangement the water in the boiler would be kept constantly at the same level, no matter how much or how little steam was being made or used for the instant the level fell below the mouth of the tube the flow of feed-water would commence, and it would stop the instant the proper level was attained. For maintaining the level of cold water this arrangement answers admirably; would it do the same in the boiler?—H. E.

Safety-Cages.—The steam-engine governor was sometime since proposed as a means of preventing accidents through the breakage of ropes in colliery shafts. Can any of your correspondents inform me the number of lives lost last year from this cause, and can they say whether the governor safety-cage has ever been practically adopted?—T. S.

Steering Balloons.—"R. A." (Portsmouth).—The steering of balloons will probably be for ever impracticable. The effect of a lever is dependent upon the position of the fulcrum; if there be no fulcrum there can be no lever. The steering of a ship upon the sea has no connection with the steering of a balloon; a ship rides at the junction of two bodies of different densities—a balloon is entirely immersed in one fluid, and if the balloon be sufficiently light to ascend it must go with or to the end of the current of air, precisely as a stone, if sufficiently heavy to sink, must go to the bottom of water. There is no doubt that if we had machinery of fifty times the present power, yet of only one-tenth the present weight, the case would be different; but this is just what we have not got. We cannot get 2000-horse power out of any 2-horse engine yet constructed, yet this is exactly what "R. A." regards as within his reach. As to the relative weight of a good steam-engine and of an engine worked by electricity to produce the same horse-power, it is more than probable that the advantage would be greatly in favour of steam.

Precipitation of Silver—"W. J." (Aberystwith).—Sulphide of calcium, for the precipitation of silver, is considered by Mr. Kastel preferable to the sulphide of sodium, principally for the reason that its manufacture is cheaper and more easy, but also on account of the quality of the precipitated silver, which is easier to wash, to press, and to desilverise. Brimstone and freshly-burned lime are the only articles required for the production of the sulphide of calcium. The proportion of sulphur to be used depends on the quality of the lime. The lime is charged into an iron kettle, water added, and then the pulverised sulphur. It is kept boiling for two or three hours, stirred with wooden shovels, and then discharged into a filtering box. The sulphide run off below the filter can be kept in iron vessels; and the water from washing the residue is used with the lime of the next charge: 1 lb. of purest quality lime will give sufficient sulphide of calcium to precipitate 1½ lb. of silver.

THE MINING JOURNAL
Railway and Commercial Gazette.

LONDON, OCTOBER 1, 1870.

CO-PARTNERSHIP, AND ARBITRATION.

These two questions, as applied to the relations of labour and capital, have just been well debated in Newcastle-upon-Tyne. It was seemly that at a meeting of the Social Science Association, held at such a place, prominence should be given to subjects than which hardly any are now more important to master and man, outside an actual demand for the products in which each deal. That district has the credit of being the part of this island in which the principle of industrial co-partnership was first fairly tried by English employers, and it is with no little satisfaction to ourselves that we can point to the coal and iron industries as having been those branches of trade in which—not forgetting Messrs. Crossley—the method is being satisfactorily worked out. In the North of England, too, arbitration in trade disputes was first applied to the adjusting of differences between employers and employed, upon a larger scale than elsewhere in this country—applied, we may be excused for intimating, by ironmasters and ironworkers. Thereabouts, therefore, if anywhere the allied questions could be debated by men having a practical knowledge of their themes. Happy, too, were the debaters in being able to express their sentiments and expound their plans in a section of the Congress over which Mr. Rupert Kettle presided as chairman. Mr. Kettle, we need scarcely say, is the author of the scheme of arbitration which has been adopted by branches of the building and other industries, and he it was who was chiefly instrumental, as the first umpire, in making arbitration run smoothly when it was started by the ironmasters and ironworkers.

The several days' discussions in Section B of the Economy and Trade Department, at the fourteenth annual Congress of the National Association for Promoting Social Science, will henceforth be regarded as the occasion when co-partnerships in industry and arbitration in trade disputes were brought before the country with a completeness and a thoroughness that must contribute to the progress of those amicable relations between capital and labour, which every well regulated mind ardently desires. Upon the arbitration topic, the views of the Cleveland ironmasters, who have adopted the method, were enunciated in a paper by Mr. John Jones, the masters' secretary, whilst the views of the men were well expressed by representatives on their side. Indeed, not alone in prepared papers, but also in extempore utterances—"How far is it desirable and practicable to establish Courts of Conciliation or Arbitration between employers and employed?" was an interrogatory abundantly answered in the affirmative. Unanimously it was resolved—

"1. That this section desires to draw the attention of the Council of the Association to the fact that, in the opinion of the section, the working of Boards of Conciliation and Arbitration, as a means of preventing, and when they arise, of settling disputes between employers and employed, has been successful; and that it is desirable encouragement should be given to their extension, under similar conditions, to other industries and other localities than those in which they have been already established.—2. That such boards should be established voluntarily; and the best form of such board seems to be that of an equal number of representatives of employers and employed, presided over by an independent Chairman, to be chosen by the representatives, who shall act as umpire in case the representatives cannot agree, and whose decision shall be final.—3. That the decision of the board or the umpire, as the case may be, should be in the nature of an ordinary award, and capable of legal enforcement; and that it is desirable for the Legislature to provide some simple and inexpensive plan of compelling the attendance of parties and witnesses, or of enforcing such decisions."

Then came the enquiry, "How far is it desirable and practicable to extend partnerships of industry?" If upon the topic of arbitration in the iron trade the experience of two years can be quoted, a longer life can be claimed for co-partnerships in the iron and coal trades, a more protracted existence for co-partnerships in the cotton trade, and "co-operation in the North of England" can be dated back a quarter of a century. If not so widely applied, then, in the North as arbitration, certainly for a longer period co-partnerships have existed there. The fact should weigh with employers thereabouts, as elsewhere, who suffer loss by reason of a want of hearty co-operation by their men. That during the long time the subject has been in a tangible shape before the world it has made so little progress in this country is conclusive as to the comparative disfavour with which it is viewed by the majority of employers at collieries and iron works. The *Mining Journal* has from time to time noticed the many excellencies and unvarying success of the method of co-partnership practised by Messrs. Briggs. The paper by Mr. A. O. Greening, with which on Monday the co-partnership debate was opened, made prominent mention of Messrs. Briggs' method. Mr. Greening, it may not be amiss for us to repeat, showed that when Messrs. Briggs proposed their scheme of dividing profits with their workpeople they estimated their fair gains as employers at an average of 10 per cent. on a capital of 80,000*l.* or 90,000*l.* Mr. Henry Currer Briggs, in a printed address, ventured to say that the workpeople by increased care and economy of materials might add a sum of 3000*l.* per annum to these profits, of which increase he proposed to ensure them one-half as a bonus in wages. Was that expectation, Mr. Greening asked, too sanguine? Far otherwise. The profits of the enterprise since have exceeded the employers' estimate by at least 20,000*l.* per annum; and the capitalists have not only divided from 12½ to nearly 20 per cent. per annum on their capital, but have carried large sums to reserve. That Messrs. Briggs' is not an exceptional case, however much it may be quoted as such, Mr. Greening showed from the fact that in 1866 the nett profits of the different English co-operative societies, after deducting 5 per cent. interest on capital, amounted to 37½ per cent., and in 1867 to 31 per cent.

If Messrs. Briggs' experience should furnish encouragement to colliery proprietors, then Messrs. Fox, Head, and Co., of Middlesborough, should be quoted to ironmasters. After Messrs. Briggs started their partnership, subsequently to Prof. Fawcett's article ten years ago in the "Westminster Review," Messrs. Fox, Head, and Co. reconstituted their concern on a similar principle. They took as a general model Briggs and Co.'s plan, but in some material points the two plans differed. Not so, however, their success. Both have been prosperous, and each alike has proved a blessing to masters and men. In the first edition of their scheme Messrs. Fox and Co. provided for working men becoming shareholders, but this provision they afterwards expunged, because none of the men took shares, "for the simple reason (said Mr. Head, who read a paper on the plan of his firm) that they had no capital." It was quite possible, he argued, to have a co-partnership of industry without the men having any voice in the directory. The employers, he urged, should retain control, because the property is theirs. By giving the men a share in the profits without their putting money into the concern, Mr. Head fairly argued that his system, applying to the greatest number, was the most generally applicable to existing circumstances. Mr. Head's fellow-ironmasters cannot yet see with him. They believe in his being an exceptional case. No less an authority than Mr. I. L. Bell approves heartily of arbitration, but maintains that it is by no means proved by the experience of Mr. Head that co-partnership could be said to be free from all danger of dispute between capital and labour. He adduced expenditure in machinery, which subsequently proved a loss instead of a profit, and then said that he remembered a case in connection with works in which he himself was interested of a large order being taken for rails at 5*l.* a ton. Within a few months afterwards rails rose to 12*l.* a ton, and the difficulty of retaining the services of men against the competition of other works under such circumstances would be manifest. Mr. Head, however, if there are losses one year carries them forward against profits in the next, and he prevents any workman from participating in profits unless he has worked 100 full turns in the year.

These regulations would go far to prevent the difficulties which seem to threaten from co-operative partnerships, even supposing the system had not, which it has, the effect of elevating the moral tone of the men. Happily, masters who will not accept co-operation have arbitration. To those who have adopted neither we would strongly urge their consideration of their taking up one or the other. We are sorry, however, to learn that on the matter of Sunday fettling certain of the workmen who agreed to abide by the decision of Mr. T. Hughes upon that question are not carrying out that arbitrator's decision. The discussion at Newcastle presented many points of interest which may well be taken up with advantage in these columns. But we can enter upon no more at present. By-and-bye we hope to recur to the subject.

THE HOME SECRETARY ON "TRUCK."

The Right Hon. H. A. Bruce, in addressing that portion of his constituency residing in the vicinity of Glasgow, in the Trades' Hall there, referred to the leading topics agitating the political world. With regard to Scotch business—as he represented a Scotch constituency—he could only apologise and promise. As Home Secretary, he might apply (he said) the famous line of Goldsmith—with a slight change—

"Eternal tempests rattle round his head."

But if the right hon. gentleman has not more solid footing than he evinced on this occasion when speaking of "Truck," he may find that the "tempests rattle round his head," to some extent, because he invokes them.

After speaking of measures which the right hon. gentleman had last session either to postpone or abandon, he said:—

"In the meantime, it gives me great satisfaction to think that I have been the means of directing enquiry into a matter which largely affects the working classes of this country—a system which has existed undoubtedly long in Scotland, but which, I grieve to hear, has taken extension of late years, and which I cannot but consider a disgrace to those by whom it is carried on—I mean the Truck system. (Cheers.) I have long been cognisant of the evils of the Truck system, and I have been charged with neglect in not having sooner dealt with this measure, but I will put it to you, as candid men, to judge me fairly. I had considerable experience as a magistrate, and it was my duty to convict in many cases where, as it seemed to me, the attempts made to defeat the law were as astute and as cunning as any I have heard of since. The very next year after I came into Parliament I was appointed one of a Select Committee to enquire whether any further legislation was possible for the purpose of suppressing the evils that still existed under the Truck Act. That Commission sat during the whole of the session of Parliament, and the result of their deliberations was that they did not see their way to any strengthening of the Act. Several Secretaries of State have issued enquiries on the subject, and reports have been made to them which have been published. Several Secretaries of State, to my knowledge, have considered the subject with a view to the improvement of the law, and all have abandoned the undertaking as hopeless. I think, therefore, that I shall not be charged with any undue neglect and disregard of my duties in not having undertaken that which many men my superiors in ability and experience had declared to be hopeless. But when, on the motion of Mr. Mundella, it was shown that there were those great evils—that there were evils that were deeply affecting the interests of the working classes, and at the same time sowing discord between the different classes of society—I considered that another effort should be made, and an effort as complete as possible, in order to discover the whole extent of the evil, and, having discovered it, to apply the remedy. Commissioners were appointed with unusual power—with power to examine witnesses on oath. I hope they will obtain the truth in this matter; and if the case be as it is represented, and as I am sorry to say there is but too much reason to believe, I hope it will be in my power to present to Parliament a measure which will have the effect of doing away with that which, as I have said before, seems to me little short of a national disgrace. (Cheers.) For I cannot conceive anything more disgraceful than to hold out to workmen the promise of wages, and then to break it by compelling them to deal at shops owned by their employers, there exacting from them higher prices than those charged by the trade, and at the same time frequently giving them an inferior article. (Cheers; and a voice, 'Shame.') I do not apply that remark universally to all those who practise this system. Abstractly, the Truck system of payment of wages is one which is capable of being carried on with perfect fairness, almost. I may say, with advantage, to the workman, because you can conceive an employer of labour using his capital for the purpose of getting the very best goods, and furnishing them to his workmen at even a lower rate of profit than that with which ordinary shopkeepers are contented. But we know how great the temptations are to make profits, especially during bad times; and we know that, in point of fact, however honourably this system, in itself illegal, may have been conducted by certain persons, by the majority, at any rate, it has been so conducted as to cause the deepest dissatisfaction to a large number of our countrymen. (Cheers.)"

Those present who looked round the hall as the echoing cheers reverberated to the dome, saw that they were the plaudits of men who knew nothing of the subject that called forth the admiration. We might inform the Home Secretary that instead of the stores, as a rule, either charging dearer or giving an inferior article, on examination by competent judges, it would be found that the goods are sold at the ordinary prices of the neighbourhood, and that the quality of the victuals is, in most cases, *superior* to what is supplied to the Imperial Navy or the troops of the line. We know of stores who only retail No. 1 patent sugar; and the butter is Derry seconds, equal to Sligo firsts; and the flour and bread is equal to that supplied to either army or navy. But if Royal Commissioners are content with the evidence of the malcontents of our great industries, and legislate from such evidence, then we shall have to be guided by new and singular principles of political economy.

THE COPPER TRADE.

During the quarter ending Sept. 30 the quantity of copper ore, the produce of Cornwall and Devonshire, sold at the Cornish Ticketing, was 18,885 tons, which contained 1301 tons 15 cwts. of fine copper, and realised 75,432*l.* 10s., being equal to an average of 3*l.* 19s. per ton of ore, and 57*l.* 15s. per ton of copper in the ore. During the same period the British, colonial, and foreign ores sold at Swansea amounted to 3149 tons, which contained 417 tons 17 cwts. of fine copper, and realised 26,284*l.* 10s., being equal to an average of 8*l.* 9s. 6d. per ton of ore, and 62*l.* 18s. per ton of copper in the ore. The average produce of the ore sold at the Cornwall Ticketings was 6¾ per cent., whilst that sold at Swansea gave an average produce of 13¼ per cent. From this it will be seen that the aggregate sales by ticket were 22,034 tons of ore, containing 1719 tons 12 cwts. of fine copper, and realising 101,717*l.* The subjoined is a summary of the periodical sales at the Cornwall and Swansea Ticketings respectively.

The ores sold at the Cornwall Ticketings were—

Date.	Standard.	Prod.	Price.	Per unit.	Tons.	Fine cop.	Amount.
July 7..	£ 97 0 ..	8⅛..	£5 1 6 ..	12s. 7d. ..	1506 ..	121t. 12c..	£ 7,651 11 6
„ 21..	101 7 ..	6¾..	4 1 6 ..	12 1 ..	4242 ..	285 7 ..	17,258 1 0
Aug. 4..	97 15 ..	6½..	3 13 0 ..	11 2 ..	3111 ..	203 13 ..	11,353 19 6
„ 18..	97 7 ..	6⅜..	3 13 6 ..	11 2 ..	4105 ..	271 8 ..	15,132 9 6
Sept. 1..	89 7 ..	8¾..	5 0 6 ..	11 6¼..	1405 ..	122 4 ..	7,055 10 0
„ 22..	98 16 ..	6⅝..	3 15 0 ..	11 5 ..	4516 ..	297 11 ..	16,980 18 6
	Total for the quarter				18,885 ..	1301 15 ..	£75,432 10 0
	Quarter ending June, 1870.....				19,519 ..	1340 16 ..	77,448 16 6
	Quarter ending March, 1870.....				23,464 ..	1643 10 ..	98,051 5 0
	Quarter ending December, 1869 ..				23,725 ..	1656 7 ..	99,433 12 6
	Total for the year.....				85,593 ..	5942 8 ..	£350,366 4 0
	Showing a quarterly average of ..				21,398 ..	1485 12 ..	82,591 11 0
	Corresponding quarter, Sept., 1869				23,419 ..	1670 2 ..	99,673 6 6

The ores sold at the Swansea Ticketings were—

Date.	Standard.	Prod.	Price.	Per unit.	Tons.	Fine cop.	Amount.
Aug. 2..	£86 16 6 ..	13¼..	£ 8 13 0 ..	12s. 9d..	1209 ..	163t. 4c..	£10,452 19 6
Sept. 20.	85 1 6 ..	13½..	8 3 2 ..	12 4 ..	1940 ..	254 13 ..	15,831 10 6
	Total for the quarter				3149 ..	417 17 ..	£26,284 10 0
	Quarter ending June, 1870				5443 ..	795 12 ..	50,731 19 6
	Quarter ending March, 1870				4049 ..	809 9 ..	52,109 10 0
	Quarter ending December, 1869.....				5746 ..	800 7 ..	51,197 11 6
	Total for the year.....				18,387 ..	2823 5 ..	£180,326 11 0
	Showing a quarterly average of				4,597 ..	705 16 ..	45,081 13 0
	Corresponding quarter Sept., 1869 ..				7,917 ..	1073 6 ..	70,574 16 0

The Copper Trade.—Notwithstanding the comparatively large importations of copper ore which have recently taken place into Swansea, the copper ore trade of the district is in an exceedingly flat and unsatisfactory condition. For a long time past the price has been so wretchedly low as not to pay for its manufacture; and we regret to state that another, once amongst the largest and most flourishing, works has been obliged to succumb to the exigencies of the times. The White Rock Copper Works, situate on the banks of the Swansea River, worked by the Messrs. Williams, Foster, and Co., in conjunction with Mr. H. H. Vivian, M.P., has been for some time past gradually diminishing its make of copper, furnaces having been blown out one after another, and relays of workmen discharged. There are now only some seven or eight furnaces in operation, giving employ to some 70 or 80 men; and we regret to state that the works will be entirely closed about the end of the present month of October. This must not be regarded, as some imagine, from any supposed rivalry with works at Liverpool, but simply from the long-continued depression of trade, and the low prices of manufactured copper which have ruled for a considerable time past. The stoppage of the works in question is, however, much to be regretted, both in a commercial and manufacturing point of view, the trade of the port being affected thereby, whilst a large number of men are thrown out of employ, many of whom have been engaged in the works the whole of their life time. Some years ago the works in question turned out between 60 and 70 tons of copper per week, and, of course, gave employ to several hundreds of men.

The Rating of Collieries.—It is somewhat singular that no satisfactory basis has yet been settled upon which collieries may be valued and assessed for the payment of rates. It is a matter of the greatest importance, not only to the colliery proprietors themselves but to the parochial authorities; and some universal basis of valuation would be cordially hailed by all classes alike. Able treatises have been written, the opinion of council taken, and the decision of the Appeal Courts sought, but each and all have failed to establish any mode which proves conclusive and satisfactory. The various Unions in the South Wales district are about making another effort in this most desirable direction. For some time past the system has been adopted throughout the district of assessing each colliery at a uniform rate of 6d. per ton upon the quantity of coal raised; but this is so manifestly unjust, that the Merthyr Tydvil have taken the initiative, and have given notice of their intention to appeal therefrom at the next Quarter Sessions of the Peace for the county. A general meeting of overseers of the county, consequent thereon, lately took place at Neath, at which other Unions intimated their intention to follow the example of the Merthyr Union, and thus raise the whole question for discussion. A suggestion has, however, been made by which the expenses of appeal may be saved; but whether, if carried out, it will prove satisfactory to both parties remains to be seen. The suggestion is to the effect that the Chairman for the Court of Quarter Sessions for Glamorganshire shall be asked to appoint a valuer to value every colliery in the four Unions of the county, and that, with such end in view, arrangements be made to consolidate and adjourn the appeals. For our own part, we very much question whether this mode of procedure would answer the end in view—it is simply a genteel way of "shelving the question" until a more convenient time and season. We hear that an objection has already been raised thereto by one of the most extensive colliery proprietors in the county, on the ground that the contemplated mode of assessment would not work equitably; and it is also evident that the guardians cannot in any way control or coerce the conduct of the overseers in this respect, and, therefore, it is questionable whether the guardians have any jurisdiction in the matter. In the midst of all the uncertainty and doubt which prevails upon the whole question, would it not be advisable to consult the opinions of the colliery proprietors themselves upon the matter? They are the most deeply interested, and certainly their views should be allowed to have some weight. There is certainly no insuperable difficulty in calling a general meeting of overseers and colliery proprietors of the county, where the whole question could be discussed in conference, and where, probably, resolutions could be amicably arrived at which would be satisfactory to all, and set at rest a question which for a long time past has proved one of much perplexity and doubt.

Boring by Machinery.—The hand-drilling machine invented by Mr. Villepigue has already been fully described in the *Mining Journal*, and, from the results obtained in actual practice, it appears to have quite realised the anticipations entertained of it. Under the most unfavourable circumstances, the progress made is equal to 3½ in. per minute, or twelve times the quantity of work that can be done by ordinary hand labour; and in hard coal a depth of even 12 in. and 14 in. per minute has been attained. In the Cleveland ironstone, at Messrs. Bell Brothers' Normanby Mines, two holes were drilled at the rate of 9 in. and nearly 4 in. per minute respectively. The stone, in this case, varies much in hardness, one man jumping a

yard in from 40 to 80 minutes. At the Clay Cross Colliery three holes were bored—two in the bind, at about 5 in. per minute; and one in the coal, at nearly 11 in. At the Wharncliffe Silkstone Collieries five holes were bored in the coal at from 6 in. to 14 in. per minute, and three holes in the bind at an average of 5 inches per minute. At the Staveley Company's Collieries three holes were drilled at an average of nearly 5 in. per minute, and it is estimated that this is fully twelve times the speed usually attained. In the Usworth Colliery, Newcastle-on-Tyne, three holes were bored, two in the Maudlin coal, and one in the stone top, at the rate of 8½, 12½, and 12 inches per minute respectively. Many of the holes were put in in more favourable positions for bringing down the burden than would have been possible with hand labour, so that the drill-handle could sometimes only be turned a quarter sweep. The proprietors may well congratulate themselves upon their success.

IMPROVEMENTS IN ROASTING ORE.

An improved roasting furnace is at present being introduced in Colorado, of the success of which the inventor, Mr. JOHN P. AREY, is very sanguine. The construction of the furnace is scarcely so simple as could be wished, but this may be unimportant, if the results be as satisfactory as promised. The shaft of the furnace, which is formed within the walls, rises in a zigzag manner from the chamber at the bottom for collecting the roasted ore, and terminates at the summit of the furnace, where a hopper is provided for feeding the ore into the shaft. The prominent angles of the opposite sides of this shaft from bottom to top are in about the same vertical plane. Hence the ore, while falling in streams through the shaft, will be crossed and re-crossed by the heated currents rising from the fire-place; these currents also circulate freely through the spaces opposite these angles and the descending streams of ore, and uniformly heat the shaft throughout its length. Leading out of this shaft, and near its upper end, is an escape flue, which may be either zigzag or straight, terminating in a dust chamber at the base of the furnace. Near the upper end of the principal shaft, and on one side of it, is a fire chamber, the products of combustion from which pass first into the shaft and then through the transverse passage into the escape flue.

This auxiliary fire-place is preferably arranged over the short flue, but may be placed below or opposite to it, or in any other place where the heated products will be compelled to first enter the shaft before escaping into an outlet flue. The object of this fire-place is to make the ore pass the highly-heated products therefrom previous to being brought under the direct influence of the heated currents ascending from the lower part of the shaft, by which means the ore is brought to a condition for being more readily acted upon while falling through the shaft. Another advantage is that the flame from this fire-place entering the shaft so near the common escape flue will pass into this flue along with the dust, which is either too light to pass below or which may be carried into the flue by the draught, and mingling with the escaping heat and gases will become thoroughly roasted before it reaches the dust chamber. The dust chamber is connected with a chimney, at the base of which is a fan, rotated more quickly or slowly according to the force of draught required; and to start the fire in the auxiliary fire-place, at the top of the shaft, draught dampers may be opened above or below the fire. Two furnaces are at present in course of erection, and will shortly be practically tested.

RAILWAY ACCOMMODATION IN WALES.—The newspaper press of the South Wales district is at length boldly taking up the question of better and more adequate railway accommodation. There is a universal complaint, not only as to passenger comfort and convenience, but that the provision for the mineral traffic is altogether inadequate and defective. The Great Western Company, whose line is the main artery throughout the whole district, is apparently not only regardless of the comforts and convenience of passengers, the urgent wants and necessities of its traders and mineral freighters, but also indifferent to their own interests. It has long since been proverbial that any broken-down engines will do for the South Wales trade, whilst its third-class passenger "carriages" are but little, if anything, better than "horse-boxes." With regard to its mineral traffic, there is not only no attempt made to develope the trade of the district, but the universal requests of merchants and shippers are disregarded, and thus impediments are placed in the way of trade expansion by this extraordinary apathy and indifference on the part of the railway company. How trade can flourish in the face of these obstacles, or the shareholders of the railway can expect to receive dividends arising from mineral traffic, is an enigma which can only be solved by the directors and managers of the company in question. The public generally of the whole district seem, however, to be now awakening to the necessity of endeavouring to obtain far better railway facilities both for passenger and trading purposes. Any response to this universal desire seems hopeless, so far as the Great Western Board is concerned; but the steady advance of the Midland Company into the district is watched with great interest, and its advent will be most cordially welcomed by all classes.

LOCOMOTIVES ON RAILWAYS.—Some of our mechanical readers will like to know the number of locomotives owned by the principal railway companies of Great Britain. At the close of 1868 the following undertakings had more than 100 each:—Great Eastern, 396; Great Northern, 493; Great Western, 867; Lancashire and Yorkshire, 455; London and North-Western, 1527; London and South-Western, 272; London, Brighton, and South Coast, 256; London, Chatham, and Dover, 111; Manchester, Sheffield, and Lincolnshire, 270; Midland, 680; North-Eastern, 865; South-Eastern, 243; Caledonian, 523; Glasgow and South-Western, 171; and North British, 390. The London and North-Western, ever foremost in the British railway world, will be seen to head the list.

VALUABLE LUBRICANT FOR RAILWAY TRUCKS.—That careful attention to lubrication has a material influence in lessening the wear and tear of axles and bearings is well known to all who have had any experience in connection with the use of carriages of any kind, and of railway trucks in particular, and it is generally admitted that oil is the best lubricant, although from the extra trouble attending the use of most oils, grease continues to be largely employed. These lubricating greases are, in fact, much of the nature of soap, and it is upon the melting of a portion of this material by the heat generated by the friction of the axle that the lubrication depends. It will readily be understood, then, that each time the grease-box is opened to add a fresh supply, a certain quantity of dust will, in all probability, enter; and as it is the invariable practice to carry the grease in open boxes, it is not surprising that, with the utmost care to keep the grease-boxes filled, the axle and bearings are necessarily liable to be injured by the dust supplied to it with the lubricant. The same objection must exist whenever the lubricant alone separates the axle from the external atmosphere, as sooner or later the grit so continually flying about must reach the axle, and exercise its grinding influence upon it. The difficulty appears, however, to have been entirely overcome by Mr. Lundie, the manager of the Rhymney Railway Company, who has employed the DON LUBRICATING OIL for upwards of two years with the utmost success. The ordinary grease-boxes have been used, and no alteration whatever has been made; they were simply filled with cotton-waste, saturated with the oil, a small additional quantity of oil being added at intervals of two or three days, by merely pouring it upon the cotton. The advantage of this arrangement is obvious; the cotton-waste becomes, as it were, a filter, and prevents anything but pure and clean oil reaching the parts to be lubricated. Judging from the testimonials which the importers of the oil, Messrs. Duncan Brothers, of Liverpool, have received, the economy attending its use is very great, Mr. Lundie estimating the saving at 50 per cent. in material alone, whilst the lubrication is in every respect most satisfactory; and others who have used it give equally favourable accounts of it as an economical lubricant, not only for trucks but for engines and machinery. Thus, Mr. Thomas Emmerson Forster, M.E., of Newcastle, finds a saving of 60*l.* per annum on four locomotives. Messrs. Dubs and Co., of the Glasgow Locomotive Works, state that they find it a good lubricating oil, and very cheap; and another very extensive company, while testifying to its good qualities for general colliery purposes, affirm that they find it to answer quite as well as yellow grease for their railway trucks, and at a saving of 48 per cent. Facts such as these are not to be ignored, and they are, we think, of sufficient importance to engage the serious attention of railway and mining companies, and, indeed, of all owners of machinery and trucks.

SIR RODERICK MURCHISON IN SILURIA.—The King of Siluria, Sir R. I. MURCHISON, has this week been visiting at Sinley, near Bishop's Castle, where he has been the guest of Mr. R. J. MORE. Yesterday (Friday) a number of the more distinguished members of the Severn Valley and other field clubs met Sir Roderick at luncheon, and spent a very happy hour or two in his company.

PROPOSED TESTIMONIAL TO MR. FREDERICK SMITH.—We last week briefly intimated that a meeting was held at the Bush Hotel, Dudley, by the Earl of DUDLEY'S agents, &c., to take steps to carry out a suggestion that a testimonial should be presented to Mr. F. SMITH before he left the district. We are now able to place before our readers what was proposed at this meeting. Resolutions were passed to the effect that a subscription should at once be commenced amongst the agents, workmen, and others connected with the Earl of DUDLEY'S mineral estates, and that the list be closed by the end of October. Mr. W. JEFFRIES, Wordesley, was elected treasurer, and Mr. JOHN DUDLEY, Dudley, hon. sec. We are sure that the contributions from the workmen will form no small item, for Mr. SMITH has always been a real friend and adviser to them. If we may judge from what has already been promised, the testimonial will be something exceedingly handsome.

REPORT FROM MONMOUTH AND SOUTH WALES.

Sept. 29.—The iron works throughout the district continue actively employed, and in some departments there is increased animation evinced. This is attributable almost solely to the expedition with which makers continue to push forward all the large contracts yet unexcuted, more particularly those on Russian account, which must be cleared before the Baltic ports are closed for the winter. There, are it is satisfactory to find, orders enough in hand still to afford full employment for some time to come. Fresh specifications are expected, but, perhaps, with less sanguineness, to arrive during the next quarter. Large quantities of railway iron will, undoubtedly, be required, but how long the war will cause them to be delayed is questionable. Average clearances continue to be made to the United States, but even from that quarter contracts are given out with a sparing hand. The destruction which has taken place on the Continent during the conflict may be expected to lead to large requirements, but it is doubtful whether the financial condition of the belligerent countries will allow of their being immediately supplied. In connection with the Tin-Plate Trade there is scarcely anything fresh to notice. The works throughout the district are fairly employed, and business is tolerably brisk, but prices are still unremunerative.

Although a fair amount of business is being done in the Steam Coal Trade, there is a diminution as compared with two or three weeks ago. The advices lately received from several of the foreign markets have not been encouraging as regards the negociations for peace, and some coal proprietors entertain a thought that the shipments to some of the northern ports will increase. From several of the southern ports of Spain the demand is necessarily smaller than usual, because almost every branch of trade is suspended, and for war purposes only is coal consumed in anything like large quantities. The season for House Coal business has just been entered upon, and numerous purchases are now being made to replenish winter stocks.

The capacities of many of the collieries in the district, both house and steam coal, have been increased largely since last year, by improvements and extensions, and a considerably expanded demand is now necessary to keep the pits in regular employment. Extensions of the mine tracks are still being carried out in many parts of the district, amongst which may be mentioned Cyfarthfa mines and collieries, Penydarren, and the Messrs. Nixon's collieries. New pits will soon, it is expected, be opened in connection with the Penydarren works.

All the works in the Pontypool district are gradually resuming operations, many of which have been unlighted for a considerable period. The Lower Mill Works were successfully re-started a few days ago.

The enquiry by commission into the operation of the Truck Act in South Wales was opened on Tuesday, as was announced, and several days' sittings have been gone through. The Commissioners were Mr. C. S. E. Bowen, barister-at-law, and Mr. A. G. Sellar. It was at first doubtful whether much evidence could now be adduced in this district, the Truck System, which once was undoubtedly prevalent, having been, to all appearance, almost entirely abandoned. A number of witnesses, however, have submitted to examination, and some important testimony given. The superintendents of police in the various divisions of the county of Glamorgan deposed to the existence of company's shops in connection with the works in the districts of Swansea, Bridgend, and Pontypridd. But nearly all the works referred to are some of the second and third class establishments, and such as are, as it were, in isolated parts of the districts. From these places several witnesses, men and women, gave tolerably clear evidence as to the practice of long pays, and the issuing of notes to the men, by which they obtained provisions from the company's shop, cash being rarely obtained. The enquiry is, it is understood, to be continued at Merthyr and other parts of the district.

The arrivals at Swansea include—the Juliette, from Nantes, with 230 tons of lead ore, for Richardson and Co.; Probite, from Bilboa, with 110 tons of iron ore, for H. Bath and Son; Julia, from Huelva, with 200 tons of pyrites, for H. Bath and Son; Elise, from Bilboa, with 162 tons of iron ore, for Aberdare Co.; St. Brannock, from Bilboa, with 170 tons of iron ore, for James Strick; Reine de Coeur, from Antwerp, with 145 tons of fire-clay, for Richardson and Walters; Aimee Louis, from Bilboa, with 85 tons of iron ore, for Bath and Son; Hermes, from Bilboa, with 160 tons of iron ore, for Holloway Bros.; Francis, from Bilboa, with 150 tons of iron ore, for James Strick; Miner, from Bilboa, with 329 tons of iron ore, for Aberdare Co.: Emma, from Bilboa, with 260 tons of iron ore, for Cory Bros.; Jeune Felix, from Bilboa, with 95 tons of iron ore, for T. Wood and Co.; Norma, from Bilboa, with 150 tons of iron ore in bulk, for T. Wood and Co.; Hampshire, from Carloforte, with 802 tons of zinc ore, for H. Bath and Son; Peep O'Day, from Carloforte, with 230 tons of zinc ore, for Richardson and Co.; Emily Waters, from Chanaral, with 700 tons of copper ore, for Richardson and Co.; Petite Eugene, from Bilboa, with 190 tons of iron ore, and Reine des Anges, from Bilboa, with 113 tons of iron ore, for James Stick; Tacna, from Hondekilp, with 656 tons of copper ore, for Richardson and Co.

REPORT FROM SCOTLAND.

Sept. 28.—The raising of the blockade, the lowering of the import duty into Germany by 5s. a ton, on 1st proximo, and the opening of the German ports, caused a demand for steamers to take out iron there, which has increased our exports this week, and gives hopes of a continuance; but with this comes the probability of the prolongation of the war to an indefinite extent, so that the heavy shipments are unaccompanied with the usually increased demand. The market closed last week with hardening prices up to 52s. prompt, but on Monday on receipt of the failure of the negociations for peace, the market gave way, and closed down to 51s. 6d. cash. Yesterday there was no improvement, and 51s. 4½d. for cash was the closing price, and 51s. 7½d. a month. To-day market very quiet, and business done at 51s. 4½d., and 51s. 5d. cash, closing buyers 51s. 4½d., and 51s. 7½d. a month, sellers wanting a fraction more. No. 1, g.m.b., 51s. 9d.; No. 3, 51s. 3d. Makers' iron without change. The foreign shipments of the week were 9930 tons, and the coastwise 6718 tons = 16,648 tons, against 11,983 tons in the same week last year.

Makers of Manufactured Iron are getting through with their orders, but the smaller works experience no difficulty as yet; larger makers are, however, not quite so hopeful of the future. The specifications shipped include bars, tie-bars, flues, sheet galvanised, and nail-rods; cast manufactures, including hollow ware, pipes, railway chairs, &c. Prices are hardly so firm, and there is rather a tendency with makers to add an additional 5 per cent. to induce orders.

At the meeting of the Iron Workers' National Association at Sunderland, a matter came under consideration having reference to the gas furnaces that have been introduced into the Motherwell Works and others that are now building at Blochairn, Glasgow. Evidence was adduced to show that they had been injurious to the health of the workman, and had materially increased his labour, and intensified the amount of heat which he had to endure. The conference finally agreed to the following recommendation:—"That this conference recommend to the men of Scotland, who say that they are working the gas furnaces at a pecuniary disadvantage, and which, according to the evidence of the men, is most injurious to health, to give in their notice to leave the works if their grievance is not removed, and that they endeavour to find situations for them elsewhere." With regard to Blochairn, most extensive as well as expensive ranges of gas furnaces are in course of erection on the opposite side of the canal from the works, which it would be ruinous to abandon; and it is quite likely that if the men leave these works, the Messrs. Hannay will be compelled to bring in new hands—men new to the trade—and train them to the work, and thus add to the number employed through the unworkableness of the men. Surely what can be done elsewhere may be done at Motherwell and Blochairn.

With the close of the spring shipments there is a falling off in the enquiry for coals, and present low quotations are hardly maintained. The coastwise trade is rather improving, and household coal is receiving more attention. During the week the foreign and coastwise shipments amounted to an aggregate total of 25,815 tons, against 27,315 tons in the corresponding week of 1869. Miners are quiet, with wages ranging from 3s. 9d. to 4s. 6d. a day.

Last week, before Sheriff Spens, at Hamilton, Andrew Pone, miner, Watsonville, Motherwell, was charged with having, on July 1 last, violated the 4th Special Rule of the Mines Inspection Act, at the Lady Emily Pit, Dalziel, belonging to Mr. John Watson, coalmaster, by going into or improperly near the place in which he was accustomed to work while he knew that fire-damp then and there existed. After evidence he was convicted, and fined 10s., or seven days imprisonment, his lordship intimating at the same time that if any more cases of a similar nature were brought before him the parties would not be so leniently dealt with

The minerals in the estates of Garbethill (Dumbartonshire), and Gladdenhill, Catcraig, and Millwood (Lanarkshire) are to be let.

On Saturday, the Association of Engineers in Glasgow paid a visit of inspection to the works at the Hutchisontown Bridge, which is in course of erection across the Clyde. They expressed themselves satisfied with the workmanship, and were glad to see that Mallet's buckled covering-plates had been introduced into Scotland. Out of the whole number required, the makers had only lost one or two, which rendered this, their first introduction into Scotland, quite a success.

Last week there was launched, at Port Glasgow, a handsome paddle-steamer, of over 900 tons register, intended for the service of the Hunter River New Steam Navigation Company, Sydney, N.S.W. This vessel was contracted for by Messrs. Macnab and Co., Greenock, and is the sixth vessel of the class furnished by them for the trade between Sydney and the Hunter River. She was named the Maitland, and is now being fitted with oscillating engines of 250-horse power, with feathering paddle-wheels, and very large tubular boilers. The Maitland will leave for Melbourne and Sydney, *via* the Suez Canal, calling at Plymouth. She will take out passengers, for which she has splendid accommodation. Yesterday a finely-modelled screw-steamer was launched for the Liverpool and Mississippi Steamship Company. It was named the Crescent City, is classed 100A at Lloyd's, and will have engines of 220-horse power. Her dimensions measure 325 ft., and 35 ft. by 27 ft. 6 in.

REPORT FROM DERBYSHIRE AND YORKSHIRE.

Sept. 29.—The state of the Iron Trade in Derbyshire has in no way changed since our last notice, so that the works as a rule are kept fairly going. The collieries, also, are doing a good business. A rather large tonnage of steam coal has been recently sent to Grimsby, for exportation to the North of Europe, but this source appears likely to fall off shortly, by the closing of the Baltic for the winter. It was expected that the opening, or, rather, the withdrawal of the blockade from Hamburg would have led to a large and immediate demand for steam coal for that port, which has long been one of the best customers the English colliery proprietor has had. The fact that supplies had fallen off, and prices had almost doubled, led to a good deal being sent there during last week; but the news received on Wednesday, that a part of the French fleet was cruising at the mouth of the Elbe, has been the means of stopping vessels from proceeding there. By the way, much surprise has been felt at the inactivity of the fleet, and the question has been frequently asked what it has done besides capturing a few comparatively small craft. A good deal of house coal is being forwarded from Clay Cross and other places to London, to which an increased quantity will now be sent, as the winter trade is gradually setting in. A considerable tonnage of coal and coke is also passing over the Midland line into Northamptonshire, for the supply of the furnaces there, and from which the wagons return freighted with Ironstone.

The activity which has for some time been the rule at several of the works in Sheffield, which produce heavy iron and steel goods and war material, is fully maintained. Heavy armour-plates and massive shields, as well as steel guns and gun-carriages, are in brisk request. Indeed, the rolling-mills are as busy as they well can be. Makers of rails, plates, and general locomotive work are in full swing, and a good business is being done at several of the foundries in the district. Bessemer steel material of every description continues in brisk demand. In the Rotherham district, also, trade generally is favourable, and with every prospect of continuing so during the winter. The works of Messrs. Newton, Chambers, and Co., at Chapeltown and Thorncliffe, are now busy. Although there has been some slight interruption to the work, owing to the dearth of water, gas, water, and heating pipes, gas tanks, palisadings, gates, sanitary sinks, stove, and general castings are in very good demand. The collieries after their long stand, owing to the dispute, are now showing some of that unceasing activity which formerly characterised them, and already between 500 and 600 of the old hands have resumed work, in addition to the large number of non-Unionists who have been employed for some time. The works of the Messrs. Dawes, at Milton and Elsecar, are kept well going, and it is expected that the new gas furnaces for puddling at the former place will soon be completed, so that with the new rail mill in operation a great increase will take place in the production of rails and other materials.

The great event of the week in South Yorkshire has been the meeting called for the purpose of finding a way to send coal to London otherwise than by the Great Northern; and from the very spirited manner in which the matter has been taken up by the wealthiest of the coalowners, there is very little doubt but what the effort made will succeed, and that they will be placed in a better position for competing with the Derbyshire and North Country owners.

The Coal Trade in the Barnsley district is, on the whole, tolerably good, with a fair tonnage going to London, but, of course, nothing like what it has been in some former years. For Silkstones there has been quite an improved demand lately, and there is slightly more doing in engine fuel with Lancashire. So far our coalowners have had plenty of orders for steam coal, more particularly for Hull and Grimsby, from which shipments of late have been rather heavy; but the activity is not expected to last much longer. Coke is in very brisk request, there being markets for all that is made.

THE OLD SILKSTONE COLLIERIES.

The village of Silkstone, about four miles from Barnsley, and where the well-known seam of coal which takes its name from the place was first worked nearly 70 years ago, was the scene of great rejoicings on Saturday last. Some time since the men in the employ of Capt. Clarke, of Noblethorpe Hall, the proprietor of the Old Silkstone Collieries, struck, owing to the proposed change in the wages to be paid to about a dozen of the men, and it was to celebrate the adjustment of the dispute that the men were invited to a dinner, which was provided in a large marquee in the centre of Noblethorpe Park. At noon the men and boys, numbering several hundreds, walked in procession to the parish church, which was nearly filled by a large and attentive audience, including a good many of the wives and children of the men, as well as persons from a distance.

The Rev. J. L. WALTON, the vicar, gave a highly interesting address on the position of the miners in the district in relation to their employers, and the things which were a bar to the progress of the working collier. One of the great obstacles to the advancement of the men, he said, was the want of education, for so far what had been done in promoting it had been done for and not by them. Ability to read was worth but little unless sedulously used in the attainment of that knowledge to which it was only the key. There were some among them to whom reading afforded neither pleasure nor profit, and who wondered that others could read for hours together. Want of time was often an excuse for not learning, although time was found for the beerhouse, lounging al street corners, or idling in the fields. Those who prefer passing their time in that way must be contented to perform the drudgery work, and leave the higher places of confidence and trust to be taken by those who have appreciated the advantage of education. It was, therefore, the duty of the working men to help to place the rising generation, so far as education was concerned, in a better position than the present, for it was painful to reflect that so large a proportion of the working classes were to be found in the list of criminal offenders. It stood upon record that whilst young persons between 15 and 20 formed not quite one-tenth of the population, they were guilty of nearly one-fourth of its crime. They could not wonder at that when they knew that children whose education was neglected were, as a rule, the first to find their way to prison. Another obstacle to the progress of the class he was addressing was their improvident habits, forgetting that the time would come when they could not work, and for which it was their duty to make what provision they could whilst they were in a position to do so. Another habit productive of a great deal of evil was that of gambling. Let them avoid, then, all games of chance, by which they must either deprive themselves or their fellow-workmen of some of their hard-earned fruits of toil. Indifference to home comforts and the moral training of their children were evils which were also prejudicial to the advancement of the working classes. Valuable as school instruction might be, it was assuming too much to suppose that without the influence of good home training it would be sufficient to cause their children to be moral young men and women. The home, therefore, should be a moral training school. The last impediment to the progress of the working classes which he should notice was the want of enlightened independence. One step in that direction on the part of the workmen was strict integrity towards their employers, especially when they bargained for certain hours of their time, and fulfilled their engagement by paying for them. If power, wealth, or threats were insufficient to move a man from what he know to be wrong that man, however poor, was independent. One of the means to help forward their improvement to those who could read was through the agency of books, and applying the knowledge so gained by applying it to its proper use—the exercising and disciplining of the various faculties of the reason and mind, so that they might grow stalwart and strong. Before concluding, he would say with regard to work and labour itself, "It is only by labour that thought can be made healthy, and only by thought that labour can be made happy, and the two cannot be separated with impunity." All honour to the earnest-hearted ones who amid the hard struggles of a toiling life still put their shoulders to the wheel, and cry *nil desperandum*. He urged them to honest individual independence, and to elevate themselves above ignorance, bigotry, prejudice, and hypocrisy, above low cunning, trick and treachery, and all those detestable vices which lay in the path of their progress.

On leaving the church a procession was formed, and, preceded by the Dodworth Band, the whole of the workpeople proceeded to the Park, and having passed in front of the Hall, then proceed to the marquee. Nearly 400 sat down to an excellent dinner, to which full justice was done. At the conclusion of the repast the chair was taken by the Rev. D. L. Walton, who was supported on either side by Capt. Clarke and Mr. Rowley, M.D., and others.

After the loyal toasts had been disposed of, Mr. WILSON gave the health of Captain and Mrs. Clarke, which was received with much enthusiasm.

Captain CLARKE, in returning thanks for the hearty reception the toast had met with, said he was glad to see so many happy faces around him. He could assure them that both himself and Mrs. Clarke would do all they could to promote their welfare of the men and their families. He hoped also that

those would be a corresponding effort on the part of the men to promote his interests as their employer.

The CHAIRMAN, in proposing "Success to the Old Silkstone Collieries," contrasted the present happy state of the place with what it was a year ago, when the men were away from work so long. The present occasion, he believed, would be the means of cementing a new bond of union between the employed and the employer, which would long continue, and be strengthened year by year.

Capt. CLARKE said he had ever been desirous of meeting every fair request on the part of the men; but capital had its claims as well as labour. The collieries would be useless without the workmen, and the latter would not be required but for the capitalist. He hoped that the gathering would be looked upon as a cordial reunion between himself and them, and that for years to come a dispute would be unknown at Silkstone. When they had a grievance he trusted that they would bring it before him, and he would endeavour to settle it without any outside aid.——Mr. BALM then gave the health of the manager, which was responded to by Mr. E. TEASDALE and Mr. LAWTON. Several other toasts were given, after which various athletic sports were indulged in for prizes given by Mr. Clarke, and which afforded a good deal of amusement to himself and the members of his family.

THE COAL TRAFFIC BY RAILWAY TO LONDON.

IMPORTANT MEETING OF COALOWNERS AND RAILWAY DIRECTORS.

One of the largest and most influential meetings of coalowners which has been held in Yorkshire took place at the King's Head Hotel, Barnsley, on Tuesday, convened at the instance of the South Yorkshire Coalowners' Association. The members of that body and others were met by Lord Auckland, Sir E. Watkin, Mr. Underwood, and Mr. Sacre on the part of the Manchester, Sheffield, and Lincolnshire Railway Company. There were also present Mr. Aldwicke, Mr. Smith, Mr. R. Baxter, Doncaster; Mr. Bartholomew and Mr. Blythe, Wombwell Main Colliery; Mr. Crofts and Mr. Batty, Darley Main and Pinder Oaks Collieries; Mr. G. Cralk, East Gawber Colliery; Mr. Stewart and Mr. Simpson, Lund Hill; Mr. Dymond, the Oaks Colliery; Mr. Pope, Denaby Main; Mr. P. Cooper, the Holmes Colliery, Masborough; Mr. J. Cooper, Mr. Mann, and Mr. Maddison, Worsborough Collieries; Mr. J. Mitchell, Swaithe and Edmund's Main Collieries; Mr. Newton and Mr. A. Chambers, the Chapeltown and Thorncliffe Collieries; Mr. Huntriss, Darfield Main Colliery; Mr. Warrington, Strafford Main; Mr. H. Walker, Wharncliffe Silkstone Colliery; Mr. Waring, Rotherham; Mr. Lawton, Blacker Main; Mr. E. Booth, Silkstone Fall Colliery, &c. Sir E. Watkin was unanimously called to the chair, and Mr. Crofts was solicited to act as secretary on the occasion.

Mr. E. WATKIN, in opening the business of the meeting, said that the gentlemen present would be acquainted with the recent decision given by Sir J. Karslake with regard to the agreement entered into some seven years ago between the Great Northern and Midland Railway Companies as to the traffic rates for coal going over the respective lines to London. By that arrangement the tonnage of coal sent from South Yorkshire to the metropolis had fallen off more than one-half, whilst the Great Northern could not have the agreement dissolved without giving five years' notice. For altering that state of things various suggestions had been made, including a loop line to join the Great Eastern from London, for it was evident that if the Yorkshire coalowners were to be relieved it must be by some means independent of the Great Northern. For the purpose of regaining the lost trade to London, he thought that that, to some considerable extent, could be effected by the colliery proprietors starting an independent line of steamers from Grimsby to London. If that were done the Manchester, Sheffield, and Lincolnshire Company would aid them as far as possible, by giving such a rate to that port as would enable the South Yorkshire colliery proprietors to compete more favourably with Newcastle and also with Derbyshire. If that were done an arrangement might be entered into been the two parties based on a fair division of the profits which would result from such an arrangement.

It was stated that a rate of 1s. per ton less than was paid by the Great Northern, besides the city and other dues, would place the coalowners of South Yorkshire in a position to admit of their competing favourably with the Midland and Northern coal fields. It was also suggested that a loop-line, *via* the Manchester and Sheffield, to Lincoln, to join the Great Eastern at March, and which, from the very favourable character of the gradients, could be made at a very moderate cost indeed, would afford all that could be desired. It was felt, however, that as such a mode of reaching London would require an Act of Parliament, and a considerable time in constructing, something of a more immediate character was required, as it was necessary that an effort should be at once made to recover back some of the trade which has been lost during the last few years.

Mr. BAXTER said it appeared to him most likely indeed that the present position of the coalowners of South Yorkshire with regard to the Great Northern, as the medium of taking their produce to London, would ultimately lead to the formation of an independent line, unconnected with the former, and by which they would be able to compete with other districts.

Sir E. WATKIN said he had almost become a convert to the opinion just expressed by Mr. Baxter.

It was then moved and seconded, and unanimously agreed to, that a deputation, consisting of Mr. C. Bartholomew, Mr. Steward, Mr. Mitchell, Mr. Pope, and Mr. T. Dymond, should wait upon the directors of the Manchester, Sheffield, and Lincolnshire Railway Company, with a view to ascertaining what rate they would give from the South Yorkshire coal field to the pit of Grimsby in the event of a service of steam packets being established from there to London, and report to a future meeting. In a discussion which took place the desire of the Great Northern to get rid of the agreement with the Midland was questioned, seeing that it was taking a good deal of coal from the Derbyshire coal field, and had not given the five years' notice to cancel the agreement, as required.

A committee was then formed for the purpose of arranging the bases on which the proposal of Sir E. Watkin, and the forming of a line of steamers from Grimsby to London, could be carried out, and to report to a future meeting.

REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

Sept. 29.—The Preliminary Quarterly Meeting of the South Staffordshire Ironmasters has been held to-day, at Birmingham, under the presidency of the Chairman for the year, Mr. F. Smith. It was resolved to make no change in the trade list of prices, which continue based on 8*l.* per ton for common bars. The question of the appeal of the workmen for an advance of wages was brought before the meeting, which unanimously approved the decision of the standing committee of the Association, announced to the men by the Chairman, that in the present position of the trade no change can be made in the rate of wages. The next matter of importance for consideration was the appointment of Chairman for the coming year. The whole panel of the committee of the Association having served office in turn, it became necessary to make an arrangement for the next year. Ultimately, it was decided to appoint Mr. Hunt, the manager of the New British Iron Company, of the Corngreaves Iron Works, near Dudley, Chairman for the year 1871. Mr. Hunt has been very assiduous in his attendance at the committee meetings of the trade, and has been always willing to devote time to any question affecting its interest. The general question of the election of Chairman was, therefore, not raised.

On 'Change, after the meeting, Pig-Iron remained firm for best brands, but buyers got a slight reduction on most other descriptions. Native all mine, 3*l.* 15s.; hematites, 4*l.*; and cold-blast natives, 4*l.* 10s. per ton. In the home trade there was a very fair demand for bars, plates, angles, small iron, and strips for tube making. Sheets were reported not so active as they have been, the Russian orders being mostly worked off; but a good demand is noted for galvanising and corrugating purposes. Bridge and girder specifications continue to come in, and in some cases are very heavy.

The raising of the blockade of the North German ports has led to a few orders being given out, which, with the speedy prospects of a more serious blockade by frost, are pressed for completion. Otherwise the trade is rather quiet, and is likely to be dull during the winter, though orders may be just now held back, as is usual at the end of a quarter.

The Conference of Ironworkers at Sunderland has been considering the movement in North Staffordshire for the purpose of obtaining an advance of wages. It was resolved to prepare an appeal to the masters of that district, asking them to meet the men on the subject at a special meeting, and a deputation from the Conference was appointed, to proceed to North Staffordshire for the purpose of promoting the movement. It appears to be now arranged that the men in Staffordshire are to fight the battle for those in the North, to suffer all the loss and privation attending a strike, and then, when if it so turns out they succeed, the men in the North claim the advance, because it has been given elsewhere.

A new wood screw has been brought out by Mr. John Frearson, mechanical engineer, of Birmingham, which seems to obviate evils connected with the present screw. The nick by means of which screws are now driven is a great element of weakness, half the head not unfrequently falling off, from the weakness which the nick causes. Mr. Frearson's screw has a V-shaped nick, deep in the centre, where there is plenty of substance, and shallowing towards the thin edges. The driver being V-shaped, has a very firm grip of the screw.

The Truck Acts are, it seems, largely violated in the case of the nailers of Rowley, Blackheath, Old Hill, and other places south of Dudley, and the *Birmingham Gazette* advises that the Commission now enquiring should consider their case. The suggestion is so far good, but the real cure for the poverty and misery of the nailers is to prevent so many of their children being brought up to the trade, which it is to be hoped the Factory Acts and the Workshops' Regulation Act will effect.

THE SANDWELL PARK SCHEME.—The directors of the Sandwell Park Colliery Company held a meeting on Tuesday, at Sandwell Park, and decided upon the spot where the shafts are to be sunk, so that operations have now actually commenced. Fresh impetus will be given to this scheme by the late visit of the Dudley Mining Institute to the Hafod Pits, Ruabon, for there they have sunk through the Permians, and found coal at a spot in many respects similar to that chosen for exploration at Sandwell. Should this undertaking prove successful, of which there is every probability, another vast coal field will be opened up in the centre of England, and Mr. Henry Johnson, the originator of the scheme, and his colleagues will reap a bountiful harvest. The gentlemen who comprise this company cannot be too highly commended, for we have authority for stating that they have come forward purely for the encouragement of an undertaking which has in view such a laudable object. They look on the capital invested as money lost, and should success crown their efforts they will be amply rewarded; should it be otherwise they will not be disappointed, will have the satisfaction of knowing they have made an effort to improve a large and important district.

The Dudley Correspondent of the *Wolverhampton Chronicle* writes:—

There is an improvement in the demand for coal, and rates have become firmer. West of Dudley the quotations are as follows:—Best thick coal, 12s. 6d.; common, 8s. 8d.; lumps, 7s. 6d.; and slack, 3s. 6d. per imperial ton for the works, but for domestic purposes the price is somewhat higher. White ironstone and gubbin are in fair request, at from 12s. 6d. to 13s. per ton, of 2240 lbs. The prices of coal and ironstone on the east side of Dudley range higher than the above quotations. In both districts many are still selling at long weight, and, of course, the price is governed accordingly. The labour market continues rather active, and the working classes are well employed. One of the largest stacks in South Staffordshire is being built by Mr. Frederick Smith, near the Earl of Dudley's New Level Furnaces, and it may be seen towering above the Round Oak Works, at a little distance behind them. In addition to this a large new blast-engine is about to be erected, and when finished the constructions of the furnaces will be altered so as to utilise the gases, and lessen the cost in the manufacture of pig-iron. The economic smelting of iron has given rise to a good deal of discussion in the district, and there is a growing opinion in favour of the greater capacity of furnace, and the method of utilising waste gases at present employed in the North of England. Wherever this plan is adopted it is proved beyond doubt that it prevents a great waste of fuel, which is so desirable now that the thick coal of South Staffordshire is so rapidly diminishing.

Original Correspondence.

SCOTCH IRON TRADE—PIG-IRON WARRANTS.

SIR,—Agreeing entirely with the article on the "Pig-Iron Warrant Stores of Glasgow," in last week's Journal, so far as their importance is concerned, and impressed with the extreme desirability, therefore, of their being conducted on a satisfactory footing, to which complete identification of the lots specified in each warrant appears to many essential, I would wish you to state that the principle of identification on which the Forth and Clyde Canal Company's store was opened in 1863, so far from being abandoned in favour of any other plan, is still adhered to; of this any holder of these warrants may at any time satisfy himself, by proceeding to the store at Old Basin, and comparing the numbers of the lots, and their markings in the warrant, with the lots themselves on the ground. EXP.

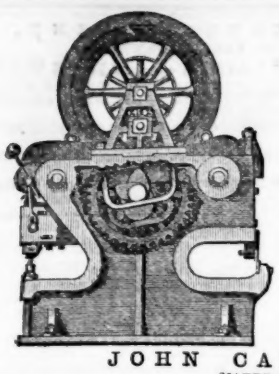
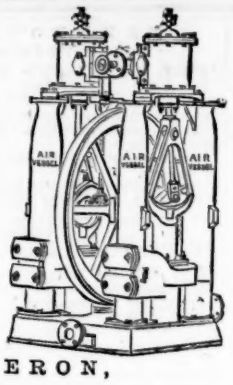
Glasgow, Sept. 29.

SUPERPHOSPHATE OF LIME.

SIR,—Will you kindly give me space to ask a question of some one of your numerous correspondents who may be competent to give me a reply, and who would, perhaps, kindly oblige me by doing so.

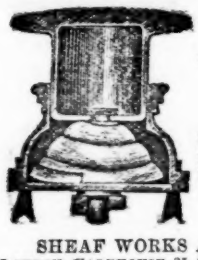
It is this—What would be the commercial value of a bed of fossil-fish debris—principally oysters—as a material for the manufacture of superphosphate of lime? The stratum is upwards of 3 ft. thick, and can be raised by "open work" and by mining. The organisms which these shells enclosed were, of course, still in them when this stratum became overlaid by that next above it. The stratum mentioned is in a country where a good manure is a *very great* desideratum, and although the country is naturally well suited by climate, &c., to be very productive, the want of a good fertiliser prevents one-half (I may say *one-quarter*) being produced that could otherwise be obtained from the soil. Iron and copper pyrites could be got very cheaply for the manufacture of sulphuric acid, if necessary, and the district is on the coast, and near a small harbour. There are also other eligible channels for the profitable employment of a moderate capital in the same immediate neighbourhood, with labour cheap. M. E.

[For remainder of Original Correspondence see this day's Supplement.]

JOHN CAMERON,
MAKER OF
STEAM PUMPS, PORTABLE ENGINES, PLATE BENDING ROLLERS, BAR AND ANGLE IRON SHEARS, PUNCHING AND SHEARING MACHINES, PATENTEE OF THE DOUBLE CAM LEVER PUNCHING MACHINE, BAR SHEARS, AND RAIL PUNCHING MACHINES,
EGERTON STREET IRON WORKS,
HULME, MANCHESTER.

THOMAS TURTON AND SONS,
MANUFACTURERS OF

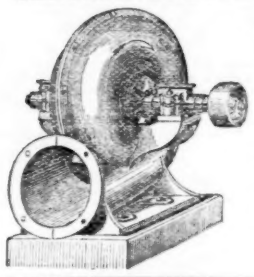


CAST STEEL for PUNCHES, TAPS, and DIES, TURNING TOOLS, CHISELS, &c.
CAST STEEL PISTON RODS, CRANK PINS, CONNECTING RODS, STRAIGHT and CRANK AXLES, SHAFTS and FORGINGS of EVERY DESCRIPTION.

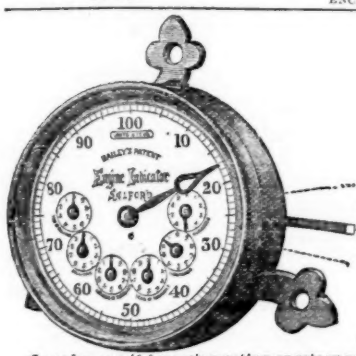
DOUBLE SHEAR STEEL,	FILES MARKED
BLISTER STEEL,	T. TURTON,
SPRING STEEL,	EDGE TOOLS MARKED
GERMAN STEEL,	WM. GREAVES & SON

Locomotive Engine, Railway Carriage and Wagon Springs and Buffers.
SHEAF WORKS AND SPRING WORKS, SHEFFIELD.
LONDON WAREHOUSE, 35, QUEEN STREET, CANNON STREET, CITY, E.C.
Where the largest stock of steel, files, tools, &c., may be selected from.

W. GÜNTHER,
CENTRAL ENGINEERING WORKS, OLDHAM
MANUFACTURER OF MOST IMPROVED

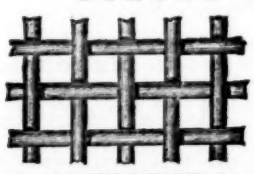
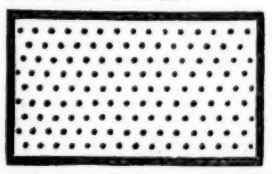


Silent Fans, for blowing smiths' fires, furnaces, &c.
" " exhausting foul air, dust, vapours, &c.
" " ventilating buildings, factories, mines, tunnels, ships, &c.
Centrifugal Pumps and Pumping Engines. [high and low falls.
Schiele's Turbine Water Wheels, for Steam Engines, for driving fans, pumps, &c.
ILLUSTRATED PRICE LISTS AND REFERENCES ON APPLICATION.



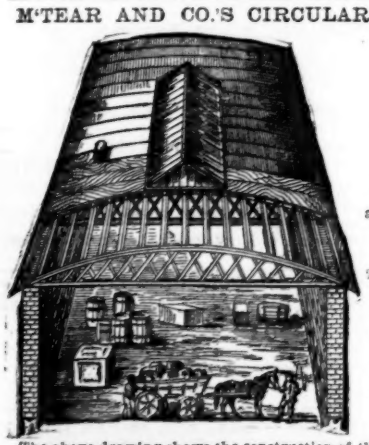

BAILEY'S TEST PUMPS & SPEED INDICATORS.
Bailey's Test Pump for Boilers, Pipes, &c., with Gauge to 250 lbs., £10 10s.
BAILEY'S PATENT SPEED INDICATOR, 7 in. dial to 100 millions, £4 4s.
(In order, say if for reciprocating or rotary motion.) Used for Pumping Engines, Winding Purposes, &c.
J. BAILEY & CO., STEAM GAUGE MAKERS AND BRASS FOUNDERS, ALBION WORKS, SALFORD, LANCASHIRE.

STRONG WIREWORK.

STRONG WIREWORK, the cross wires equally bent; also BEST STAMP GRATES, both of iron and copper, and punched copper plates. DITTO TUBBED. All the above promptly supplied at
W. ESCOTT'S MINING MATERIAL DEPOT,
TAVISTOCK, DEVON.

M'TEAR AND CO.'S CIRCULAR FELT ROOFING,



FOR
GREAT ECONOMY
AND
CLEAR WIDE SPACE.

For particulars, estimates, and plans, address,—
M'TEAR & CO.,
20, BUDGE ROW, CANNON STREET, LONDON;
54, PORTLAND STREET, MANCHESTER;
OR,
CORPORATION STREET, BELFAST.

The above drawing shows the construction of this cheap and handsome roof, now much used for covering factories, stores, sheds, farm buildings, &c., the principals of which are double bow and string girders of best pine timber, sheeted with ½ in. boards, supported on the girders by purlins running longitudinally, the whole being covered with patent waterproof roofing felt. These roofs so combine lightness with strength that they can be constructed up to 100 ft. span without centre supports, thus not only affording a clear wide space, but effecting a great saving both in the cost of roof and uprights.
They can be made with or without top-lights, ventilators, &c. Felt roofs of any description executed in accordance with plans. Prices for plain roofs from 30s. to 60s. per square, according to span, size, and situation.
Manufacturers of PATENT FELTED SHEATHING, for covering ships' bottoms under copper or zinc.
INODOROUS FELT for lining damp walls and under floor cloths.
DRY HAIR FELT, for deadening sound and for covering steam pipes, thereby saving 25 per cent. in fuel by preventing the radiation of heat.
PATENT ASPHALTE ROOFING FELT, price 1d. per square foot.
Wholesale buyers and exporters allowed liberal discounts.
PATENT ROOFING VARNISH, in boxes from 3 gallons to any quantity retired, 8d. per gallon.

OZOKERIT (PATENTED). OZOKERIT

THE NEW AND BEAUTIFUL CANDLES

Made of this mineral will be found to far surpass any that have been introduced, possessing marvellous brilliancy of light, and burning to the end without bending, though placed in the hottest and most crowded rooms. They will be found a great boon and ornament to all
ASSEMBLY AND BALL ROOMS,
The intense heat and injury caused by the use of gas to gilding and pictures being avoided by their use. Their great hardness adapts them for all climates. To be had in all sizes, 1s. 3d. per lb.
Order of your chemist, grocer, or chandler, and insist on using no others. Wholesale (only) of the patentees—
J. C. AND J. FIELD, UPPER MARSH, LAMBETH, LONDON,
Who will be happy to answer any enquiry as to the nearest agency where these wonderful candles can be obtained.

THE HOWARD SAFETY BOILER.

Made entirely of WROUGHT-IRON TUBES, and other improvements, adapting it for MARINE, STATIONARY, and PORTABLE ENGINES.
THESE BOILERS ARE NOW WORKING SUCCESSFULLY IN ALL PARTS OF THE WORLD.
One Firm in the North of England, who had a 50-horse power Boiler in 1868, has since purchased over twenty others.
Patentees and Manufacturers: J. and F. HOWARD, Britannia Iron Works, Bedford.
London Office: 4, Cheapside (three doors from St. Paul's).

TITANIC STEEL AND IRON COMPANY, LIMITED,

FOREST STEEL WORKS, COLEFORD, GLOUCESTERSHIRE,
SOLE MANUFACTURERS OF

MUSHET'S TITANIC BORER STEEL.

R. MUSHET'S Special Steel for Lathe and Planing Tools (a new Steel which REQUIRES NO HARDENING after being forged); Mushet's Titanic Cast Steel for Taps and Dies, Lathe and Planing Tools, Drills, Punches, Chisels, Shear Blades, Hammers, &c., &c.

Double Shear Steel; Spring Steel; Blister Steel; Files.

MINERS' HAMMERS AND MALLETS,

OF ALL DESCRIPTIONS.
LONDON: Mr. HENRY MUSHET, LOMBARD EXCHANGE, E.C. GLASGOW: Messrs. JOHN DOWNIE and CO., 1, ROYAL BANK PLACE. NEW YORK: Messrs. CHARLES CONGREVE AND SON, 104 and 106, JOHN STREET.

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IMPORTER AND REFINER OF

OILS, TALLOW, GREASE, AND TAR.

WHOLESALE DEALER IN
Cotton Waste, Lamp Cottons, Steam Cement, Colours, Paints, and General Colliery and Engineers' Stores.
MAKER OF "THE 'REGISTERED' DOUBLE-REFINED MACHINE OIL,"
For Engines, Lathes, Planing Machines, &c.
AND THE IMPROVED BROWN CORVE OIL FOR COLLIERIES.

BRAMALL LANE, SHEFFIELD.

A SAVING OF FIFTY PER CENT.

IS EFFECTED BY THE USE OF THE PATENT

DON LUBRICATING OIL,

Which is quite as good and durable a lubricant as the best. While there is no more serviceable or economical Oil for Engines and Machinery, it is the best known lubricant of the axles of Railway Trucks and Carriages, and it may be applied in the ordinary grease boxes, at a saving of one-half over grease. Particulars forwarded on application.

EXTRACTS FROM LETTERS RECEIVED:—

From James Nasmyth, Esq., the Inventor of the Steam-Hammer.
"I am highly pleased with it as a most effective and durable lubricator."

From the Engineer, Bridgewater Trustees, Walkden.
"I find its lubricating qualities effective and durable."

From Dubs and Co., Glasgow Locomotive Works.
"We find it a good lubricating oil, and very cheap."

From John Hartop, Esq., Manager for Earl Fitzwilliam, Elsecar.
"The oil answers my purpose well."

From Messrs. Richard Evans and Co., Haydock Collieries.
"It answers quite as well as yellow grease (for railway wagons), and at a saving of forty-eight per cent."

From Thomas Emmerson Forster, Esq., Mining Engineer, Newcastle
"I find a saving upon four locomotives of £60 per annum."

From the Lancashire and Yorkshire Railway.
"It kept the (fan) shaft perfectly cool, and with a less quantity."

From T. and W. Clarke, Havelock Works, Leicester.
"Having fully tested its merits, I find it equal to the best lubricating oil I have ever used."

From Messrs. Henry Balfour and Co., Leven, Fife.
"We are glad to say that it suits us admirably, and it gives us better results, at less expense, than other oils."

From Chatwood, Sturgeon, and Co., Bolton.
"The men were rather against it at first, but have now, by experience, learned to appreciate its good qualities. It answers our purpose so completely that we shall continue to use it and no other."

AGENTS AND CANVASSERS WANTED.

DUNCAN BROTHERS, 20, Unity-buildings, Liverpool, Sole Importers.

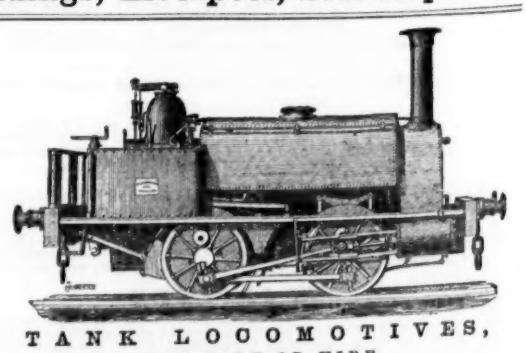
BICKFORD'S PATENT SAFETY FUSE,
FOR CONVEYING FIRE TO THE
CHARGE IN BLASTING ROCKS, &c.

Obtained the PRIZE MEDALS at the "ROYAL EXHIBITION" of 1851; at the "INTERNATIONAL EXHIBITION" of 1862, in London; at the "IMPERIAL EXPOSITION" held in Paris, in 1855; at the "INTERNATIONAL EXHIBITION," in Dublin, 1865; at the "UNIVERSAL EXPOSITION," in Paris, 1867; and at the "GREAT INDUSTRIAL EXHIBITION," at Altona, in 1869.

BICKFORD, SMITH, AND CO., of TUCKINGMILL, CORNWALL, MANUFACTURERS of PATENT SAFETY-FUSE, having been informed that the name of their firm has been attached to fuse not of their manufacture, beg to call the attention of the trade and public to the following announcement:—
EVERY COIL of FUSE MANUFACTURED by them has TWO SEPARATE THREADS PASSING THROUGH the COLUMN of GUNPOWDER, and BICKFORD, SMITH, AND CO. CLAIM SUCH TWO SEPARATE THREADS as THEIR TRADE MARK.

G. COPELAND, Jun.,
IMPROVED
PATENT SAFETY BLASTING CARTRIDGE
MANUFACTURER.
Specially made for Coal Pits, to PREVENT ACCIDENTS from the EXPLOSION of FIRE-DAMP from BLASTING.
Adapted for any required purpose ABOVE OR BELOW WATER.
For particulars, address to—
CONSTANTINE, NEAR PENRYN.

THE CORNWALL BLASTING POWDER COMPANY
ST. ALLEN MILLS, TRURO,
Beg to call attention to their WARRANTED WATERPROOF SAFETY BLASTING CARTRIDGES, adapted for SUBMARINE BLASTING and USE IN WET GROUND GENERALLY.
Prices and samples on application.



TANK LOCOMOTIVES,
FOR SALE OR HIRE.
HENRY HUGHES AND CO.
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JOHN AND EDWIN WRIGHT
PATENTEES.
(ESTABLISHED 1770.)
MANUFACTURERS OF EVERY DESCRIPTION OF IMPROVED
PATENT FLAT AND ROUND WIRE ROPES
From the very best quality of charcoal iron and steel wire.
PATENT FLAT AND ROUND HEMP ROPES.
HIGH RIGGING, SIGNAL AND FENCING STRAND, LIGHTNING CONDUCTORS, STEAM PLOUGH ROPES (made from Webster and Horsfall's patent steel wire), HEMP, FLAX, ENGINE YARN, COTTON WASTE, TARPAULING, OIL SHEETS, BRATTICE CLOTHS, &c.
UNIVERSE WORKS, MILLWALL, POPLAR, LONDON.
UNIVERSE WORKS, GARRISON STREET, BIRMINGHAM.
CITY OFFICE No. 5, LEADENHALL STREET, LONDON, E.C.

TANGYE BROTHERS AND HOLMAN,

10, LAURENCE POUNTNEY LANE, LONDON,

CORNWALL WORKS (TANGYE BROTHERS), BIRMINGHAM.

SOLE MAKERS OF

THE "SPECIAL" STEAM PUMPS.

Over 1000 in Use.

IN USE AT

The Black Boy Collieries, Bishop Auckland.

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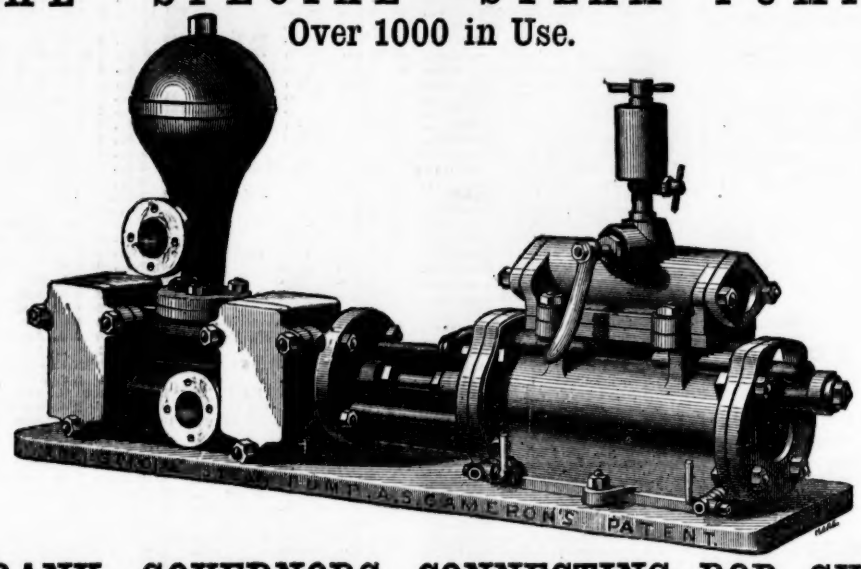


NOTE.

Requires NO Shafting, Gearing, Riggers, or Belts.

All Double-Acting.

Works at any Speed, and any Pressure of Steam.

Will Force to any Height.

Delivers a constant stream.

Can be placed any distance away from a Boiler.

Occupies little space.

Simple, Durable, Economical.

NO FLY-WHEEL, CRANK, GOVERNORS, CONNECTING-ROD, GUIDE, OR ECCENTRIC.

Supplied to H.M.'s Arsenal and Dockyards at Woolwich, Chatham, and Devonport, also for use on board H.M.'s Ships, Hercules and Monarch.

FORTY THOUSAND GALLONS PER HOUR IS BEING RAISED 40 FEET HIGH AT Mr. McMURRAY'S PAPER MILL, WANDSWORTH, BY THE "SPECIAL" STEAM PUMP.

THE "SPECIAL" STEAM PUMP AS APPLIED TO DRAINING QUARRIES.

The engraving illustrates the "SPECIAL" Steam Pump as employed in draining quarries. At the Bangor and Carnarvon Slate Company's Quarries, in Wales, four or five of these pumps, of different dimensions, are at work, as well as at other quarries in various parts of the kingdom.

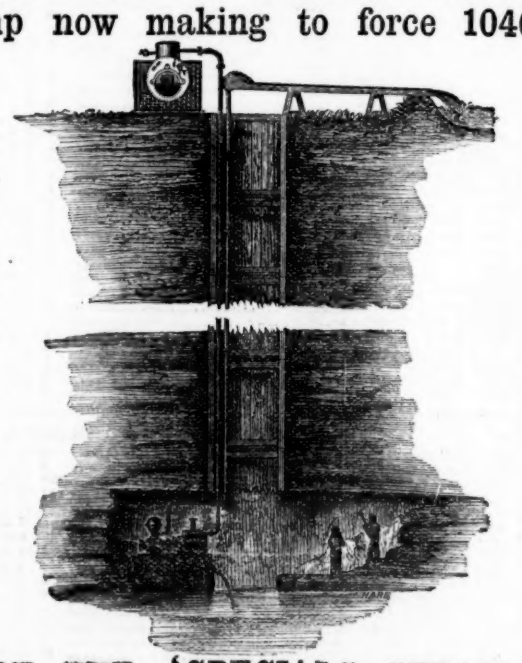
The pump being fixed in the required position, steam can be supplied by means of a felted steam-pipe from any boiler situated several hundred feet away from the pump; and although a little extra condensation would in such case take place, this system of draining quarries is found far more economical than employing detached engines and pumps, with their cumbrous details of shafting, gearing, riggers, and belts.

The "SPECIAL" Steam Pump can be adapted to work at either high or low pressure steam, and to discharge the water to a vertical height of from 200 to 400 feet. For very high lifts, pumps with long strokes are recommended.

The pump is very portable, and can be readily lowered nearer to the water as the work proceeds.

THE "SPECIAL" STEAM PUMP AS APPLIED FOR DRAINING MINES.

One "SPECIAL" Steam Pump now making to force 1040 feet in one direct lift.



The arrangement in the accompanying illustration shows an economical method of draining mines without the expense of erecting surface-engines, fixing pump-rods, or other gearing. A boiler adjacent to the pit's mouth is all that is necessary on the surface; from thence steam may readily be taken down, by means of a felted steam-pipe, to connect the pump with the boiler. The pump may be placed in any situation that may be convenient for working it, and connecting the steam, suction, and delivery pipes.

These engines can be fixed and set to work in a comparatively short time, and also at a very small outlay. They are used in large mines as auxiliary engines, and will be found invaluable adjuncts in all mining operations.

To estimate the quantity of water to be raised by any given size of pump refer to the tabulated list below. It is recommended to use long-stroke pumps where the height exceeds 100 ft., so that the largest result may be obtained with a minimum wear and tear of the pump pistons and valves. The pumps are provided with doors for ready acce s to all working parts.

PRICES OF THE 'SPECIAL" STEAM PUMPS.

Diameter of Steam Cylinder .....inches	2½	3	4	4	6	6	6	7	7	7	8	8	8	8	10	10	12	12	14	16	24
Diameter of Water Cylinder .....inches	1½	1½	2	4	3	4	6	5	6	7	4	6	7	8	6	7	8	10	12	7	10
Length of Stroke .....inches	6	9	9	12	12	12	12	12	12	12	12	12	12	12	12	12	18	24	24	24	24
Strokes per minute	100	100	75	50	50	50	50	50	50	50	50	50	50	50	50	50	35	—	—	—	—
Gallons per hour	310	680	910	3250	1830	3250	7330	5070	7330	9750	3250	7330	9500	13,000	7330	9500	13,000	—	—	—	—
PRICE	£10	£15	£20	£35	£30	£40	£47 10	£50	£52 10	£57 10	£50	£55	£65	£75	£70	£80	£100	—	—	—	—

IF BRASS LINED, OR SOLID BRASS OR GUN-METAL WATER CYLINDERS, WITH COPPER AIR VESSELS, EXTRA, ACCORDING TO SIZE.

Any Combination can be made between the Steam and Water Cylinders, provided the Lengths of Stroke are the same, thus—8 in. Steam and 3 in. Water, or 10 in. Steam and 3 in. Water, adapted to height of lift and pressure of steam, and so on.

TANGYE BROTHERS & HOLMAN: Offices & Warehouse, 10, Laurence Pountney-lane, London, E.C.

IRON AND COAL COMPANIES.

Shares.	Company.	Paid.	Price.
£100	John Abbot and Co. [L.]	£ 75 0 0	10 8 dis.
50	Blaenavon Iron and Steel Co. [L.]	7 10 0	—
100	Bolckow, Vaughan, and Co. [L.]	30 0 0	34 35 pm.
100	Brown, John, and Co. [L.]	70 0 0	4 dis. par.
10	Consett Iron Co. [L.]	7 10 0	4 5 pm.
100	Cammell and Co. [L.]	80 0 0	24 21 dis.
32	Ebbw Vale Co. [L.]	27 10 0	8¾ 8½ dis.
20	General Mining Association [L.]	20 0 0	3 5
15	Hopkins, Gilkes, and Co. [L.]	10 0 0	⅞ ¾ dis.
10	Ironmasters' Company [L.]	10 0 0	—
10	Midland Iron Co. [L.]	5 0 0	19½ 20½ pm.
2½	Mersey Steel and Iron Co. [L.]	11 10 0	8½ 7⅞ dis.
4	Mwyndy Iron Ore Co. [L.]	3 10 0	2½ 2 dis.
1	Nerbudda Coal and Iron	0 6 6	par. ⅛ pm.
25	Palmer's Shipbuilding and Iron Co. [L.]	25 0 0	¾ ¼ dis.
35	Ditto ditto	35 0 0	¾ ¼ dis.
100	Parkgate Iron Co. [L.]	65 0 0	8 6 dis.
20	Patent Shaft and Axletree Co. [L.]	10 0 0	4⅞ — pm.
50	Rhymney Iron Co. [L.]	50 0 0	19 17 dis.
15	Ditto New	15 0 0	6 5 dis.
50	Shotts Iron Co.	50 0 0	18½ — dis.
100	Sheepbridge Iron and Coal Co. [L.]	55 0 0	16 15 dis.
100	Staveley Iron and Coal Co.	60 0 0	34 35 pm.
100	Ditto ditto New	10 0 0	6 8 pm.
100	Thames Iron Company	100 0 0	—
7½	Titanic Iron and Steel	5 0 0	—
100	Vancouver Coal [L.]	6 0 0	par. 1 pm.
10	Van Iron Ore [L.]	10 0 0	—
100	Wigan Coal and Iron Co.	100 0 0	5 dis.
75	Ditto ditto	75 0 0	6 dis.

THE MINING SHARE LIST

BRITISH DIVIDEND MINES.

Shares.	Mines.	Paid.	Last Pr.	Business.	Total divs.	Per share.	Last paid.
1500	Alderley Edge, c, Cheshire*	10 0 0	—		10 6 8	0 5 0	Jan. 1869
6000	Boscaswell, t, c, St. Just	1 0 0	—		0 2 0	0 2 0	Apr. 1870
200	Botallack, t, c, St. Just	91 5 0	225	220 230	580 5 0	5 0 0	Aug. 1870
20000	Bronfloyd, l, Cardigan*	2 10 0	3⅛	3 3¼	2 9 0	0 1 0	July 1870
5094	Bwlch Consols, s-l, Cardigan*	4 0 0	3½	3 3¼	0 9 0	0 2 0	May 1870
6400	Cashwell, l, Cumberland*	2 10 0	—		0 12 6	0 3 6	Sept. 1870
916	Cargoll, s-l, Newlyn	15 5 7	—		16 15 0	0 10 0	Aug. 1869
1280	Chanticleer, l, Flint	0 7 8	—		0 1 0	0 0 6	Nov. 1868
2450	Cook's Kitchen, c, Illogan‡	19 14 9	18½	17½ 18	4 3 0	0 10 0	July 1870
867	Cwm Erfin, l, Cardiganshire*	7 10 0	—		32 3 0	0 5 0	July 1870
128	Cwmystwith, l, Cardiganshire	60 0 0	—		387 10 0	2 0 0	July 1869
280	Derwent Mines, s-l, Durham	300 0 0	—		177 0 0	2 10 0	July 1868
1024	Devon Gt. Consols, c, Tavistock†	1 0 0	80	70 80	1145 0 0	4 0 0	May 1870
656	Ding Dong, t, Gulval‡	49 14 6	19	17 20	7 10 0	0 15 0	Aug. 1870
1432	Dolcoath, c, t, Camborne	32 4 6	130	125 130	245 2 6	3 0 0	Aug. 1870
12800	Drake Walls, t, Calstock‡	2 10 0	1⅜	1 1⅛	1 3 3	0 1 0	July 1870
6144	East Caradon, c, St. Cleer†	2 14 6	4	4 4½	14 11 6	0 2 0	July 1867
300	East Darren, l, Cardiganshire	32 0 0	—		182 10 0	2 0 0	Feb. 1870
6400	East Pool, t, c, Pool, Illogan	0 9 9	8⅛	8 8⅛	10 12 3	0 4 0	Sept. 1870
1906	East Wheal Lovell, t, Wendron	3 9 0	31½	31 32	12 16 0	2 0 0	July 1870
2800	Foxdale, l, Isle of Man*	25 0 0	—		75 15 0	0 10 0	June 1870
5000	Frank Mills, l, Christow	3 18 6	2⅝	2⅛ 2¼	4 8 0	0 2 6	Aug. 1870
3950	Gawton, c, Tavistock	3 10 6	—		0 3 0	0 3 0	Jan. 1868
15000	Great Laxey, l, Isle of Man*	4 0 0	18	17½ 18	13 1 0	0 8 0	Sept. 1870
3000	Great Northern Manganese*	5 0 0	—		—	5 p.ct.	Feb. 1869
5908	Great Wheal Vor, t, c, Helston†	40 0 0	6	5½ 6	15 12 0	0 3 6	June 1870
10240	Gunnislake (Clitters'), t, c	4 19 0	—		0 1 0	0 1 0	July 1870
1024	Herodsfoot, l, near Liskeard†	8 10 0	45	44 46	52 10 0	1 10 0	Feb. 1870
2000	Holmbush and Kelly Bray, c*	1 0 0	—		0 3 0	0 1 0	Nov. 1869
10000	Killaloe, sl, Tipperary	1 0 0	⅞	⅞	0 7 0	0 0 7	Mar. 1870
165	Levant, c, t, St. Just	10 8 1	—		1101 0 0	2 0 0	Aug. 1869
400	Lisburne, l, Cardiganshire	18 15 0	—		529 0 0	2 0 0	Jan. 1870
3000	Maes-y-Safn, l, Flint*	20 0 0	—		4 0 0	0 5 0	Oct. 1868
9000	Marke Valley, c, Caradon	4 10 6	7⅛	6⅞ 7⅛	6 6 0	0 5 0	July 1870
1800	Minera Mining Co. l, Wrexham*	25 0 0	—		278 3 3	5 0 0	Aug. 1870
20000	Mining Co. of Ireland, c, l, cl.	7 0 0	8⅛	8	0 4 6½	0 2 1	July 1870
6400	New Pembroke, t, c, Par Station	5 0 0	—		0 2 6	0 2 6	July 1870
2000	North Levant, t, c, St. Just	10 12 0	11⅛	11¼ 12	1 15 0	0 10 0	Aug. 1870
5610	North Wheal Crofty, c, Illogan†	3 11 3	2¼	1¾ 2¼	0 2 6	0 2 6	June 1870
256	Pendarves United	86 0 0	65	60 65	10 0 0	10 0 0	July 1870
5000	Penhalls, t, St. Agnes	3 0 0	—		1 9 6	0 4 0	July 1870
500	Phœnix, t, c, Linkinhorne	50 0 0	—		456 10 0	7 0 0	May 1870
2000	Poldice, t, c, Gwennap	10 0 0	—		1 0 0	0 10 0	July 1870
12800	Prince of Wales, c, Calstock	0 12 6	¾	½ ⅝	0 10 6	0 1 0	Nov. 1869
1120	Providence, t, Uny Lelant†	10 6 7	39	37 39	99 12 6	1 0 0	Sept. 1870
15000	Queen, s, c, Calstock*	0 10 0	—		0 1 0	0 1 0	Sept. 1870
5869	Rosewall Hill & Ransom, t‡	4 0 0	1⅛	1 1⅛	0 11 6	0 1 6	June 1870
512	South Caradon, c, St. Cleer†	1 5 0	250	240 250	651 10 0	4 0 0	Sept. 1870
6000	South Darren, l, Cardigan*	3 6 6	—		1 0 0	0 2 6	Nov. 1869
937	South Wh. Crofty, c, Illogan	24 10 10	9⅛	9 9⅛	3 0 0	0 10 0	June 1870
496	So. Wh. Frances, c, Illog.†‡	18 18 9	30	27½ 30	374 13 6	1 0 0	Mar. 1868
242	Spearn Moor, t, St. Just	36 17 9	19	18 20	13 15 0	1 0 0	June 1870
940	St. Ives Consols, t, St. Ives‡	10 15 0	—		0 10 0	0 10 0	May 1869
8771	St. Just Amalgamated, t*	3 10 0	—		0 2 6	0 2 6	Nov. 1869
508	Summer Hill, l, Mold	3 18 6	—		2 5 6	0 5 0	Feb. 1868
12000	Tankerville, l, Salop*	6 0 0	15	14 15	0 5 0	0 5 0	Aug. 1870
6000	Tincroft, c, t, Pool, Illogan†	9 0 0	36	34 36	25 18 6	1 10 0	Sept. 1870
2000	Trumpet Cons., t, Helston	11 10 0	23	23 25	11 12 0	0 15 0	Aug. 1870
12000	Van, l, Llanidloes*	4 5 0	62½	57½ 62½	2 15 0	0 15 0	Sept. 1870
3000	W. Chiverton, l, Perranzabuloe†	10 0 0	54	53 54	45 7 6	2 0 0	Aug. 1870
2582	West Great Work, t, Breage	5 11 0	—		0 2 0	0 2 0	June 1869
512	West Wheal Frances, t, Illogan	106 15 0	29	28 30	4 10 0	1 10 0	Oct. 1869
400	W. Wheal Seton, c, Camborne†	47 0 0	125	120 125	663 0 0	3 10 0	Aug. 1870
512	Wheal Basset, c, Illogan†	5 2 6	75	72 74	632 10 0	1 0 0	June 1868
512	Wheal Jane, s-l, Kea	10 15 0	55	52½ 55	32 0 0	1 10 0	July 1870
4295	Wheal Kitty, t, St. Agnes	5 4 6	7	6¾ 7¼	5 6 0	0 7 0	Aug. 1870
1024	Wheal Kitty, t, Uny Lelant†	3 10 6	12	10 11	12 12 6	0 10 0	July 1870
896	Wheal Margaret, t, Uny Lelant‡	13 17 6	6	4 6	78 5 0	0 10 0	Aug. 1870
1024	Wheal Mary Ann, l, Menheniot†	8 0 0	9⅛	9 9½	71 7 6	0 10 0	Sept. 1870
1000	Wh. Mary Hutchins, Plymp., t	2 12 6	—		0 10 0	0 5 0	Aug. 1869
80	Wheal Owles, t, St. Just‡	70 0 0	—		464 13 0	12 10 0	Aug. 1870
396	Wheal Seton, t, c, Camborne	60 0 0	47½	37½ 42½	254 15 0	2 0 0	Feb. 1869
17000	Wicklow, c, t, Wicklow	2 10 0	8⅛	8	60 3 0	0 5 0	Sept. 1869

FOREIGN DIVIDEND MINES.

Shares.	Mines.	Paid.	Last Pr.	Business.	Total divs.	Per share.	Last paid.
35000	Alamillos, l, Spain*†	2 0 0	1¾	1½ 2	0 10 6	0 2 0	Mar. 1870
20000	Australian, c, South Australia†‡	7 7 6	—		0 1 6	0 0 6	Aug. 1868
15000	Cape Copper Mining*†	7 0 0	16	15 16	5 17 6	0 10 0	May 1870
30000	Central American Association*†	0 10 0	—		0 6 0	0 1 0	July 1869
10000	Copiapo Mining Co., Chili†‡	16 10 0	3	2 3	0 4 0	0 4 0	April 1869
76162	Don Pedro North del Rey*†‡	0 14 0	3	3 3¼	2 3 9	0 4 0	Mar. 1870
70000	English and Australian, c‡	2 10 0	—		—	0 0 9	Feb. 1869
25000	Fortuna, l, Spain*†	2 0 0	2¾	2¼ 2¾	2 0 10	0 3 0	Mar. 1870
10000	Gonnesa, l, Sardinia*	5 0 0	—		10 per cent.		Aug. 1868
68000	Kapunda Mining Co., Austral†‡	1 0 0	⅜	⅛ ⅜	0 1 10	0 0 6	Nov. 1868
15000	Linares, l, Spain*†	3 0 0	4¼	3 4	12 8 4	0 5 0	Mar. 1870
50000	Panulcillo, c, Chili*†	4 0 0	2½	2¼ 2¾	10 per cent.		Yearly.
10000	Pontgibaud, s-l, France†	20 0 0	17	16 17	7 1 8	1 15 6	Nov. 1869
100000	Port Phillip, g, Clunes*†	1 0 0	¾	¾ 1	1 6 0	0 1 6	Jan. 1870
120000	Scottish Australian Min. Co.†	1 0 0	—	½ ¾	6 per cent.		Apr. 1870
11000	St. John del Rey, Brazil*†	15 0 0	22	22 24	81 10 0	4 5 0	Dec. 1867
15000	Sweetland Creek, g, California*†	4 0 0	3¼	2¾ 3¼	0 4 0	0 4 0	June 1870
50000	Victoria (London) [25000 £1 pd., 25000 12s. 6d. pd.]				0 9 7	0 0 7	July 1868
40000	West Canada Mining Co.*	1 0 0	—		0 19 6	0 2 6	May, 1866

NON-DIVIDEND FOREIGN MINES.

Shares.	Mines.	Paid.	Last Pr.	Bus. done.	Last Call.
130000	Almada and Tirito Consolidated, s, Mexico*†	1 0 0	1	⅞ 1⅛	Mar. 1870
50000	Anglo-Argentine, g, s, Argentine Republic*†	1 0 0	⅞	⅝ ⅞	Fully pd.
20000	Anglo-Australian, g, Victoria*	1 0 0	—		Jan. 1870
100000	Anglo-Brazilian, g*†	0 11 0	—		Feb. 1869
12500	Anglo-Italian, g*†	1 7 6	—		Jan. 1868
20000	Australian United, g, Victoria*†	2 10 0	1⅜	1 1¼	Dec. 1869
50000	Braganza, g, Brazil*	0 12 6	—		Dec. 1869
20000	Capula, s, Mexico*†	2 0 0	1⅛	1 2	Jan. 1869
30000	Chontales, g, s, Nicaragua*†	5 0 0	¾	½ ¾	Mar. 1868
100000	Cuiaba, g, Minas Geraes, Brazil	0 10 0	—		June 1870
20000	Eberhardt and Aurora, s, Nevada*	10 0 0	—		Fully pd.
100000	Eclipse, g, California*	0 15 0	¾	⅝ ⅞	Fully pd.
15000	El Chico Silver Mining and Reduction Company*	5 0 0	—		Nov. 1866
40000	Fortune Copper Mining Co. of Western Australia	2 0 0	—		Fully pd.
50000	Frontino and Bolivia, g, New Granada*†	1 18 0	¾	½ ¾	Nov. 1869
150000	General Brazilian, g*	0 16 0	¾	⅝ ¾	Sept. 1870
25000	Guerrero, g, Mexico (total cap.—50,000 shares of £1)	0 10 0	—		Aug. 1869
100000	Imperial Ottoman, s-l, Turkey*	1 0 0	—		Fully pd.
50000	Javali, g, Nicaragua	2 0 0	—		Jan. 1869
7927	Lusitanian (Portugal)†‡	3 0 0	¾	½ ¾	Dec. 1866
51000	New Quebrada, c, Venezuela*†	5 0 0	—		Fully pd.
50000	New Rosario, s, Mexico	1 0 0	—		Fully pd.
15000	Pacific, g, s, Nevada and California* (and reduced)	7 0 0	2⅞	2¼ 2½	Fully pd.
80000	Pestarena United, g, Italy*†	3 0 0	—		Fully pd.
100000	Rossa Grande, g, Brazil*†	0 15 0	½	¼ ½	Sept. 1870
50000	Sao Vicente, Brazil*†	0 6 0	—		Oct. 1868
112500	Sierra Battes, g, California*	2 0 0	—		Fully pd.
3000	St. Josephberg, c, l, Rhenish Prussia*	10 0 0	—		Fully pd.
100000	Taquaril, g, Brazil*	0 13 0	2	1¾ 1⅞	Sept. 1870
40000	Tuolumne, g, California*	2 0 0	—		Feb. 1870
43174	United Mexican, s, Mexico†‡*	28 5 2	2	2 3	May 1868
30000	Val Antigoria, g, Italy*	1 12 6	—		Dec. 1869
6000	Val Sassam, s, c, l, Italy*†	8 0 0	—		Aug. 1868
80000	Worthing, c, South Australia*†	1 0 0	—		Fully pd.
75000	Yorke Peninsula, c, South Australia	1 0 0	⅜	⅛ ¼	Fully pd.
45000	Yudanamutana, c, South Australia*†‡	3 0 0	1¼	⅞ 1⅛	Fully pd.

NON-DIVIDEND MINES.

Shares.	Mines.	Paid.	Last Pr.	Bus. done.	Last Call.
12000	Assheton, l*, Carnarvonshire	5 0 0	6	5¾ 6¼	Fully pd.
12000	Cae Gynon, l, Cardiganshire*†	2 0 0	2	1 2	Fully pd.
1000	Carn Brea, c, t, Illogan‡	30 0 0	14	14 15	June 1868
3000	Chiverton, l, Perranzabuloe	11 0 0	1¾	1 1⅛	Mar. 1870
3000	Chiverton Moor, l, Perranzabuloe	7 11 0	3¼	3 3¼	Feb. 1869
3000	Chiverton Valley, l, Perranzabuloe	3 7 6	3	2⅛ 3	Aug. 1870
512	East Basset, c, Redruth†‡	40 0 0	5	3 5	Mar. 1870
6000	East Grenville, c, Camborne	4 13 0	2⅝	2¼ 2½	Aug. 1870
1200	Fedw, l, Llanidloes*	9 0 0	—		July 1870
3000	Florida, s-l, Cardiganshire*	3 0 0	—		Fully pd.
5000	Gorsedd and Celyn Level, l, Flintshire	2 0 0	—		Fully pd.
6000	Hingston Down, c, Calstock†	6 4 0	¾	½ 1	Aug. 1870
400	New Wheal Seton, c, Camborne	70 0 0	35	30 40	Dec. 1869
3457	North Downs, c, Redruth	5 17 10	—		July 1870
695	North Roskear, c, Camborne	62 19 0	7⅛	7 7⅛	Aug. 1869
5936	North Treskerby, c, St. Agnes	1 16 4	⅛	¼	Aug. 1869
15000	Penrhyn, l, Carnarvonshire*	2 0 0	2½	2⅛ 2⅝	Fully pd.
12000	Plynlimmon, l, Llanidloes*	2 5 0	3	2⅛ 3	Sept. 1870
1024	Rose and Chiverton United, l, Newlyn	8 0 0	10	9½ 10½	May 1870
6123	South Condurrow, t, c, Camborne	5 5 6	2¼	2 2¼	Oct. 1869
10000	Tan-yr-Allt, l*, Carnarvonshire	3 0 0	3⅛	2½ 3	Fully pd.
12000	Van Consols, Llanidloes, l*	2 10 0	2½	2 2⅛	Fully pd.
6000	West Basset, c, Illogan†‡	2 18 0	⅜	⅛ ¼	Sept. 1870
2288	West Caradon, c, St. Cleer‡	2 16 0	1	1 1⅛	July 1870
12000	West Stiperstones, l, Salop*	1 0 0	—		Fully pd.
12000	West Maria and Fortescue, c, Lamerton	3 13 0	1⅝	1½ 1¾	July 1870
12000	West Pant-y-Go, s-l, Flint*	1 0 0	1	¾ 1	June 1870
12000	West Tankerville	3 0 0	—		July 1870
6000	Wheal Agar, c, Illogan	8 7 6	2¼	1⅞ 2	July 1870
512	Wheal Buller, c, Redruth†‡	35 5 0	5	3 5	Aug. 1870
5386	Wheal Crebor, c, Tavistock	2 15 6	¾	½ ¾	Sept. 1870
5724	Wheal Grenville, c, Camborne†	10 11 0	1½	1¼ 1¾	Dec. 1869
4096	Wheal Uny, t, c, Redruth	10 14 6	3	2¾ 3	Oct. 1869

NON-DIVIDEND MINES.

Shares.	Mines.	Paid.	Last Pr.	Bus.
12800	Aberdaunant, l, Llanidloes*	5 0 0	—	
6000	Ambrose Lake, t, c, St. Neot	0 2 0	—	
4000	Bedford Consols, c, Tavistock	3 2 6	1	¾
4000	Bedford United, c, Tavist.*	3 16 2	1⅛	1 1
20000	Blaen Caelan,* s-l, Cardig.	1 0 0	—	
64	Blaen-y-Glynn, l, Denbigh	70 0 0	—	
5000	Blue Hills, t, c, St. Agnes	1 7 0	—	
1200	Bryn Gwyn, l, Mold*‡	9 0 0	—	
20000	Brynpostig, Montgomery, l*	1 0 0	—	
7500	Brynystwith, l, Cardigan*	2 0 0	—	
6000	Budnick Consols	0 14 4	—	
6000	Bwadrain Cons., s-l, Cardig.	3 5 0	—	1½
30000	Caldbeck Fells, l, Cumberld.*	1 17 6	1¼	
5000	Capel Banhaglog, l, Mont.*	3 0 0	—	
7000	Cappagh, c, Ireland	1 0 0	—	
910	Caradon Consols, c, St. Cleer	33 16 0	—	
6400	Cardigan Bay, s-l, Aberyst.	5 0 0	10	
6000	Carn Camborne, c, Cambrn.	3 0 0	1¼	1
3000	Cefn Brwyno (lim. to £5)	3 0 0	—	
6000	Cefn Consols, l*	5 0 0	5⅛	5¼
3000	Chiverton Wheal Virgin, l*	0 5 0	—	
256	Condurrow, c, t, Camborne‡	76 10 0	—	
1055	Craddock Moor, c, St. Cleer‡	15 8 0	—	
50000	Crenver & Wheal Abraham*	2 0 0	—	
4000	Cwm Ricket, l, Montgom.	2 10 0	—	
4000	Devon & Cornwall United	6 6 0	—	
5000	Dolwen, l, Cardiganshire	0 10 0	—	
30000	Dyliffe Consols, s-l, Mont.	1 0 0	—	
2586	East Bottle Hill, Plymp., t, c	1 4 0	—	¾
6000	East Carn Brea, c, Redruth‡	5 19 6	⅛	
4000	East Chiverton, l, Perranz.	3 18 0	—	
4000	E. Gunnislake & S. Bed. c.	11 18 0	—	
2048	East Harptree, l, Mendips*	1 5 0	—	
4096	E. New Wh. Lovell, t, Wend.	1 2 6	—	
10000	East Parys U., l, c, Anglesea	2 0 0	—	
350	East Plynlimmon, l, Llanid.*	15 0 0	—	
3640	East Providence, t, Lelant	7 6 9	—	
5610	East Seton, c, Camborne	1 7 6	1¼	1
6000	East Wheal Reeth	1 8 8	—	
12800	Excelsior, t, c, Stoke Climsld.	0 3 6	—	
5000	Exmouth, s-l, Christow	0 6 6	1⅞	1½
12800	Florence and Tonkin United	0 3 6	⅞	⅞
6000	Gen. Min. Co. for Ireland	7 0 0	—	
40000	Glasgow Caradon, c* [30,000 £1 p., 10,000 15s. p.]			
5700	Goginan, Cardigan, l	12 10 0	—	
6144	Gonamena, c, St. Cleer	8 1 9	—	
5000	Gorn, l, Llanidloes	0 17 6	—	
4096	Great Caradon, c, St. Ive	4 17 6	⅞	
12500	Gt. N. Laxey (Isle of Man)*	1 0 0	—	
3035	Gt. Retallack, s-l, b, Perran.	3 4 0	1	1
3000	Great Rock, l, Corwen*	4 5 0	—	
4096	Great Royalton, t	0 15 6	1	
6000	Gt. S. Chiverton, s-l, Perranz	2 15 0	—	
5143	Great S. Tolgus, c, Redruth	2 5 6	¼	
12000	Great West Chiverton, s-l	2 10 0	2⅛	
6000	Great Western, t, c, Breage	2 0 0	—	
1798	Gt. Wh. Fortune, t, Breage	31 7 4	—	
4096	Gt. Wh. Lovell, t, Wendron	1 0 0	—	2
5000	Gwern Eva, l, Llantrissant	0 8 0	—	
12000	Gwydyr Park, l, Llanrwst*	1 5 6	—	
6000	Hammett, t, St. Neots	1 0 0	—	
6000	Harewood Consols	0 6 0	—	
1000	Hemerdon U., t, Plympton	1 0 0	—	
6000	Hobb's Hill, t, St. Neot	0 1 8	—	
6400	Holyfield, l, Cumberland*	1 0 0	—	
962	Leeds and St. Aubyn, t, c	23 4 2	3⅛	
30000	Lisburne Cons. s-l, Cardigan*	1 0 0	—	
5000	Llanarmon, Denbigh	2 0 0	—	
20000	Llywernog, l, Cardiganshire	1 0 0	—	
5120	Lovell, t, Wendron	0 3 0	—	
5120	Lovell Consols, Wendron, t.	0 10 6	—	
6000	Maudlin, c, Lostwithiel	4 7 0	—	
6000	Mid-Wales, l, Llanidloes*	2 10 0	—	
4662	Minera Union, l [2500 £4 p., 2162 £2 15s. p.]			
3000	Mineral Bottom, s-l	5 10 0	—	
25000	Mining Association	1 5 0	—	
6000	Mold, s-l, Flintshire*	5 0 0	—	
6144	Nangiles, t, c, Kea	7 0 11	1⅛	1⅛
12000	Nanteos Consols, l*	1 0 0	—	
4000	Nanty, l, Montgomeryshire*	1 0 0	2¼	2
10000	New Beldon, l, Northumb.	0 5 0	—	
6000	New Brynpostig, l, Llanid.	2 0 0	—	
12000	New Central Snailbeach	1 0 0	—	
6000	New Clifford, c, Gwennap*	3 15 0	—	
6250	N. Crow Hill, l, St. Stephen.	3 15 6	—	
14000	New Victoria, c, Ashburton*	1 0 0	—	
3000	N. Wh. Charlotte, t, c, St. Agnes	1 0 0	—	
4000	New Wh. Grylls, l, Perranz.	0 10 0	—	
4096	New Wh. Lovell, t, Wendron	3 4 6	2¼	1
2000	N. Wh. Towan, c, t, Wendron	1 10 0	—	
6000	North Cornwall Kaolin	0 5 0	—	
5000	No. Dolcoath, c, Camborne	4 8 0	—	
6000	North Jane, t, s-l, Kenwyn	5 1 0	—	
1000	North Lovell, t, Wendron	5 0 0	7	5½
2810	North Pool, c, Illogan	7 6	—	
12000	North Tankerville, l, Salop	1 0 0	—	
3000	N. Wh. Chiverton, l, Perran.	5 0 0	—	
10000	North Wheal Neptune, c, t	0 5 0	—	
12000	Ohio Crown, l, Isle of Man*	0 12 0	—	
12288	Okel Tor, c, Calstock	2 7 4	—	
8000	Old Gunnislake, c, Calstock	3 9 6	—	
20000	Old Treburgett, s-l, Cornwall	1 0 0	—	1
6400	Par Consols, c, St. Blazey†‡	2 14 6	—	
5694	Pedn-an-drea, t, Redruth	8 2 0	—	
20000	Pen'Allt, l, Carnarvonshire	2 0 0	1⅝	1
5000	Pendeen Consols, c, St. Just	8 4 0	—	
12000	Perkins Beach, l, Salop	1 0 0	—	
6000	Perran Consols, t	1 10 2	1	
1772	Polberro, t, St. Agnes	15 0 0	—	
2000	Polbreen, t, St. Agnes	3 0 0	6¼	5
2000	Powell United, s-l, Cardig.*	5 0 0	—	
6000	Prince Royal, t, St. Agnes	1 5 0	1⅛	
12800	Princess of Wales, c, t	0 11 0	⅞	
3877	Redmoor, c, t, Callington	2 5 0	—	
5000	Reperry Mine, t, c, Lanivet	1 10 0	—	
12000	Rhydtalog, s-l, Cardiganshire	1 0 0	—	
6000	Roaring Water, c, Ireland	3 0 0	—	
3000	Roche Consols, Roche	0 11 6	⅞	
10000	Royalton, t, St. Columb	1 8 0	—	
512	South Basset, c, Gwennap	30 10 0	—	
1000	South Bwadrain, l, Cardig.	1 0 0	—	
8000	South Cardigan, l, Cardigan.	5 0 0	6	
5000	South Carn Brea, c, t	1 3 6	—	
3000	So. Chiverton, s, l, Perranz.	6 2 6	—	
6000	South Grenville, c	0 2 0	—	
3395	So. Herodsfoot, l, Liskeard	4 17 0	—	
1500	S. Merllyn, l, Flint* (£2 shrs)	1 10 0	3	
2048	South Redmoor, c, Call.	1 0 0	—	1
5000	South St. Just, t	2 0 0	2⅛	
12000	South Van, l, Llanidloes	1 0 0	—	
3000	South Ward, l, Beerferris	0 15 0	—	
320	So. Wh. Seton, c, Camborne	94 3 0	—	
236	Spearne Consols	4 4 4	—	
7000	Stiperstones, l, Salop*	7 0 0	—	
6000	Tamar Valley, s-l, Beeralston	1 5 0	—	
4000	Teign Valley, l, bar., Bridford	1 0 0	1	
25000	Terras Tin Mine, St. Austell*	1 0 0	1⅝	
3500	Tin Hill, t, St. Austell	1 12 0	—	
6000	Tin Valley, St. Neot	1 3 6	—	
548	Trelyon Consols, t, St. Ives	17 5 0	—	
459	Tresavean and Trethurrup	22 11 0	—	
2048	Trevarrack, t, c, Uny Lelant	2 0 0	3¼	
10000	Treveddoe, t, c, Warleggan	1 10 0	—	
4096	Trewetha, s-l, Menheniot	11 14 6	—	
70	Tygwyn, l, Cardiganshire	25 0 0	—	
1000	Vaughan, s-l, Cardigan	2 0 0	—	
7684	Vigra and Clogau, c, Dolg.*‡	5 0 0	—	
15000	Virtuous Lady, c, Tavistock*	1 0 0	—	
1000	West Cwm Erfin, s-l	0 10 0	—	
256	West Damsel, c, Gwennap	40 10 0	—	
12800	W. Drake Walls, c, Calstock	0 11 0	¼	
6000	West Esgair Lle, l, Cardig.*	2 0 0	2⅝	
5000	W. Godolphin, t, c, Breage‡	0 11 0	—	
10000	West Jewell, t, Gwennap*	2 0 0	3	
16	West Margaret, t	65 0 0	—	
100	West Nant-y-Cria, l, Cardig.	10 0 0	—	
12800	West Prince of Wales, c	0 16 6	—	
12000	West Rhoswyddol, l, Mont.*	1 0 0	—	
838	West Rose Down, c, Linking.	26 0 0	9	
3535	West St. Ives, t, c, St. Ives	0 10 0	—	
512	West Tolgus, c, Redruth	66 0 0	29	
5000	West Wh. Kitty, t, St. Agnes	3 14 0	—	1½
3584	W. Wh. Tremayne, St. Erth	1 5 0	—	
741	Wheal Basset and Grylls, t	7 18 6	—	
5609	Wh. Courtenay, c, Tavistock	1 0 6	—	
811	Wh. Emily Henrietta, c, Illo.	22 10 0	5	
6000	Wheal Franco Consols, t, c	0 4 0	—	
6000	Wheal Ida, s-l, St. Ive	1 13 0	—	
4568	Wheal Sparnon, c	4 0 0	—	
1920	Wh. Trannack, c, Sithney	13 3 3	—	
6240	Wh. Trelawny, s-l, Liskeard†	2 6 0	—	
400	Wye, l, Llanidloes*	18 10 0	—	

b, blende; *cl*, coal; *c*, copper; *g*, gold; *l*, lead; *s*, silver; *sl*, slate; *s-l*, silver-lead; *t*, tin; *z*, zinc.

*** Companies marked thus * have been incorporated with Limited Liability; those marked † have been admitted on the Stock Exchange, those marked thus ‡ have paid Dividends.

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